HITACHI

SERVICE MANUAL

NTSC | AP43 Chassis

PA | No. 0041

50UX18B/19K
46UX16B/17K

R/C: CLU-850GR

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CAUTION: Before servicing this chassis, it is important that the service technician read the "Safety Precaution" and "Product Safety Notices" in this Service Manual.

SAFETY NOTICE

USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a ⚠ on the schematics and on the parts list in this Service Data and its supplements and bulletins. Before servicing the chassis, it is important that the service technician read and follow the "Safety Precautions" and "Product Safety Notices" in this Service Manual.

*For continued x-radiation protection, replace picture tube with original type of Hitachi approved equivalent type.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

PROJECTION COLOR TELEVISION

May 1994 HHEA - MANUFACTURING DIVISION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health and Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with solder. Also, when soldering do not inhale any smoke or fumes produced.

This television receiver provides display of television closed captioning in accordance with section 5.119 of the FCC rules.

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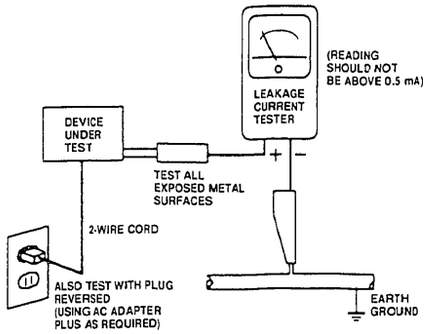
SAFETY PRECAUTIONS

1. Before returning an instrument to the customer, always make a safety check of the entire instrument, including but not limited to the following items:
   a. Be sure that no built-in protective devices are defective and/or have been deleted during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage.**
   b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to (1) spacing between the picture tube and cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.
   c. **Antenna Cold Check** — With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input exposed terminal screw and, if applicable, to the coaxial connector. If the measured resistance is less than 1.0 megohms or greater than 5.2 megohms, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.
   d. **Leakage Current Hot Check** — With the instrument completely reassembled, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.0 Leakage Current for Appliances and Underwriters Laboratories (UL) 1410, (50.7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screw heads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.1 milliamps. Reverse the instrument power cord plug in the outlet and repeat test.

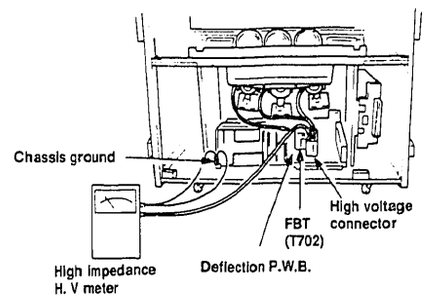

(READING SHOULD NOT BE ABOVE 0.5 mA)
LEAKAGE CURRENT TESTER
DEVICE UNDER TEST
TEST ALL EXPOSED METAL SURFACES
2-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUS AS REQUIRED)
EARTH GROUND

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING THE ANTENNA OR ACCESSORIES.

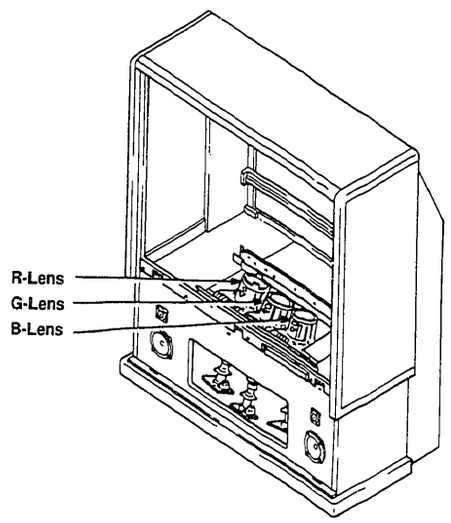
e. **High Voltage** — This receiver is provided with a hold down circuit for clearly indicating that voltage has increased in excess of a predetermined value. Comply with all notes described in this Service Manual regarding this hold down circuit when servicing, so that this hold down circuit may correctly be operated.
f. **Serviceman Warning** — With minimum contrast and brightness, operating high voltage in this receiver is lower than **31.6kV.** In case any component having influence on high voltage is replaced, confirm that high voltage with minimum contrast and brightness is lower than **31.6kV.**
To measure H.V. use a high impedance H.V. meter. Connect (-) to chassis earth and (+) to the CRT anode button. (See the following connection diagram.)

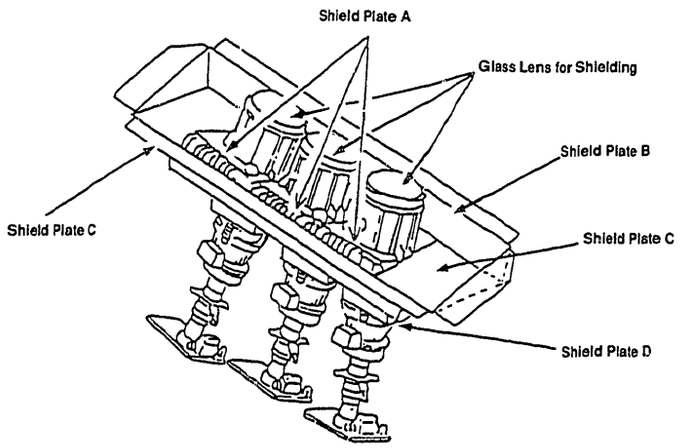
Note: Turn power switch off without fail before the connection to the anode button is made.



g. **X-radiation — TUBE:** The primary source of X radiation in this receiver is the picture tube. The tube utilized for the above mentioned function in this chassis is specially constructed to limit X radiation emissions.
For continued X radiation protection, the replacement tube must be the same type as the original, HITACHI approved type.
When troubleshooting and making test measurements in a receiver with a problem of excessive high voltage, avoid being unnecessarily close to the picture tube and the high voltage component.
Do not operate the chassis longer than is necessary to locate the cause of excessive voltage.

h. **X-Radiation Shield —**
1) This receiver is provided X-ray shield plates for the protection of X-radiation. Do not remove X-ray shield plates A, B, C, or D shown in Fig. 1 unnecessarily, when troubleshooting and/or making test measurements.
2) To prevent X-radiation, after replacement of picture tube and lens, confirm these components to be fixed correctly to bracket and cabinet, and not to be taken off easily.





Detailing X-radiation shield.
Fig. 1

2. Read and comply with all caution and safety-related notes on or inside the receiver cabinet, on the receiver chassis, or on the picture tube.

3. **Design Alteration Warning** — Do not alter or add to the mechanical or electrical design of this TV receiver. Design alterations and additions, including but not limited to, circuit modifications and the addition of items such as auxiliary audio and/or video output connectors, might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions may void the manufacturer's warranty and may make you, the servicer, responsible for personal injury or property damage resulting therefrom.

4. **Picture Tube Implosion Protection Warning** — The picture tube in this receiver employs integral implosion protection. For continued implosion protection, replace the picture tube only with one of the same type number. Do not remove, install, or otherwise handle the picture tube in any manner without first putting on shatterproof goggles equipped with side shields. People not so equipped must be kept safely away while picture tubes are handled. Keep the picture tube away from your body. Do not handle the picture tube by its neck.

5. **Hot Chassis Warning — a.** Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord and may be safety serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter measure between the chassis and a known earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground. **b.** Some TV receiver chassis normally have 85V AC (RMS) between chassis and earth ground regardless of the AC plug polarity. These chassis can be safely serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection. **c.** Some TV receiver chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.

6. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: **a.** near sharp edges, **b.** near thermally hot parts — be sure that leads and components do not touch thermally hot parts, **c.** the AC supply, **d.** high voltage and **e.** antenna wiring. Always inspect in all areas for pinched, out-of-plate, or frayed wiring. Do not change spacing between components, and between components and the printed circuit board. Check AC power cord for damage.

7. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

8. **PRODUCT SAFETY NOTICE** — Many TV electrical and mechanical parts have special safety-related characteristics some of which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified Hitachi service data by shading on schematics and by a (!) in the parts list. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part in Hitachi service data parts list might create shock, fire, and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate. For the latest information, always consult the appropriate current Hitachi service literature. A subscription to, or additional copies of Service literature may be obtained at a nominal charge from Hitachi.

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SERVICING PRECAUTIONS

CAUTION: Before servicing instruments covered by this service data and its supplements and addenda, read and follow the SAFETY PRECAUTIONS on page 3 of this publication.
NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Guidelines

1. Always unplug the instrument AC power cord from the AC power source before:
   a. Removing or reinstalling any component, circuit board, module, or any other instrument assembly.
   b. Disconnecting or reconnecting any instrument electrical plug or other electrical connection.
   c. Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.
      Caution: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
   d. Discharging the picture tube anode.
2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc.) equipped with a suitable high voltage probe. Do not test high voltage by "drawing an arc." The H.V. Distribution Box has an internal 400MΩ resistor (bleeder resistor) connected from the high voltage to ground. After power is removed from the instrument the high voltage will discharge through the high voltage bleeder resistor. If the tubes have high voltage after power is removed, then the bleeder resistor is defective or the bleeder ground is disconnected.
3. Discharge the picture tube's anode at any of the R, G, or B outputs on the High Voltage distribution box only by (a) first connecting one end of an insulated clip lead to the degaussing or kine aquadag grounding system shield at the point where the picture tube socket ground lead is connected, and then (b) touch the other end of the insulated clip lead to the picture tube high voltage distribution box R, G, or B output, using an insulating handle to avoid personal contact with high voltage.
4. Do not spray chemical on or near this instrument or any of its assemblies.
5. Unless specified otherwise in these service data, clean electrical contacts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength). **Caution:** This is a flammable mixture. Unless specified otherwise in these service data, lubrication of contacts is not required.
6. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service data might be equipped.
7. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
8. Always connect the test instrument ground lead to the appropriate instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.
9. Use with this instrument only the test fixtures specified in this service data.
   CAUTION: Do not connect the test fixture ground strap to any heatsink in this instrument.

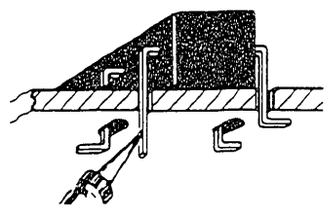
Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static type solder removal device Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range 500°F to 600°F.
2. Use an appropriate gauge of resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.
5. Use the following unsoldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).
   b. Heat the component lead until the solder melts. Quickly draw away the melted solder with an anti-static, suction-type solder removal device or with solder braid.
      CAUTION: Work quickly to avoid overheating the circuit board printed foil.
6. Use the following soldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).
   b. First, hold the soldering iron tip and solder strand against the component lead until the solder melts.
   c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
      CAUTION: Work quickly to avoid overheating the circuit board printed foil or components.
   d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.



Use Soldering Iron to Pry Leads

IC Removal/Replacement

Some Hitachi unitized chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to the areas.)

"Small-signal" Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact, then solder each connection.

Power Output Transistor Devices Removal/Replacement

1. Heat and remove all solder from around the transistor leads.
2. Remove the heatsink mounting screw (if so equipped).
3. Carefully remove the transistor from the circuit board.
4. Insert new transistor in circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heatsink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicularly to the circuit board.
3. Observing diode polarity, wrap each lead out of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and, if necessary, apply additional solder.

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Fuses and Conventional Resistor Removal/Replacement

1. Clip each fuse or resistor lead at top of circuit board hollow stake.
2. Securely crimp leads of replacement component around stake 1/8 inch from top.
3. Solder the connections.

CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board, to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board, causing the foil to separate from, or "lift-off," the board. The following guidelines and procedures should be followed whenever this condition is encountered.

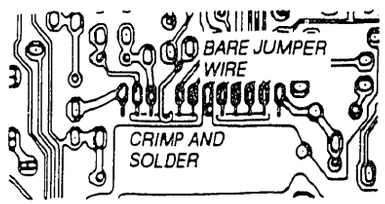
In Critical Copper Pattern Areas

High component/copper pattern density and/or special voltage/current characteristics make the spacing and integrity of copper pattern in some circuit board areas more critical than in others. The circuit foil in these areas is designated as Critical Copper Pattern and is identified and illustrated in this service data in the section titled Safety Related Copper Pattern (see data in the section titled Safety Related Copper Pattern (see table of contents for page number). Because Critical Copper Pattern requires special soldering techniques to ensure the maintenance of reliability and safety standards, contact your Hitachi personnel.

At IC Connections

To repair defective copper pattern at IC connections, use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections.)

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary.)
2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.

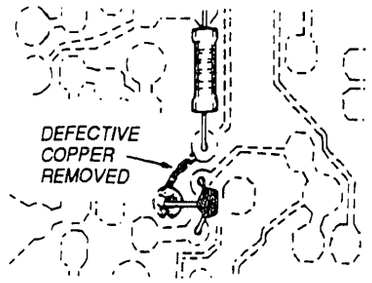


Install Jumper Wire and Solder

3. Bend a small "U" in one end of a small-gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the cut-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area, and clip off any excess jumper wire.

At Other connections

Use the following technique to repair defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.



Insulated Jumper Wire

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side. Carefully crimp and solder the connections.

CAUTION: Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges.

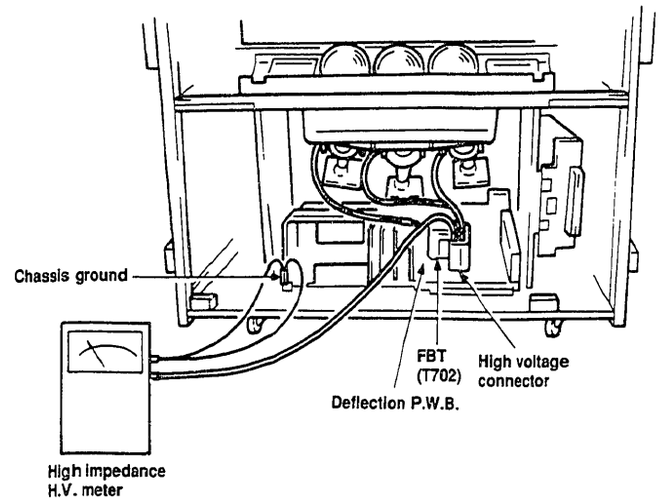
Frequency Synthesis (FS) Tuning Systems

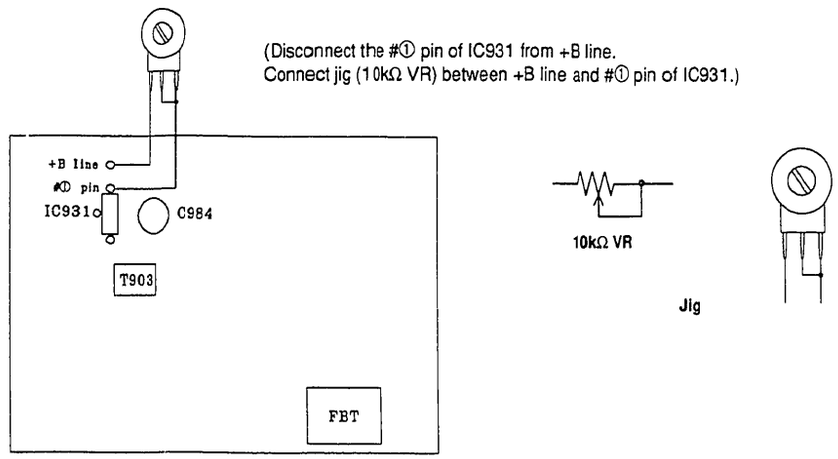
1. Always unplug the instrument AC power cord before disconnecting or reconnecting FS tuning system cables and before removing or inserting FS tuning system modules.
2. The FS tuner must never be disconnected from the FS tuning control module while power is applied to the instrument.
3. When troubleshooting intermittent problems that might be caused by defective cable connection(s) to the FS tuning system, remove the instrument AC power as soon as the defective connector is found and finish confirming the bad connection with a continuity test. This procedure will reduce the probability of electrical overstress of the FS system semi-conductor components.

TECHNICAL CAUTIONS

High Voltage limiter circuit operation check.

1. Turn off TV and connect jib as shown in Figure 2. Adjust jig fully counter-clockwise for minimum resistance.
2. Set the AC input to 120V AC and turn on TV.
3. Confirm test pattern on CRT is a usable picture, then slowly adjust jig until the picture disappears and TV shuts down.
4. When the limiter circuit is operating properly, High Voltage will be less than 35.5kV at 0.6mA when TV shuts down.
5. Turn off set immediately after checking circuit operation.
6. Unplug set for one minute to reset shutdown circuit. Remove jig and voltmeter.





Deflection/Power Supply P.C.B.
Fig. 2

SPECIFICATIONS

Model: 50UX18B 50UX19K
46UX16B 46UX17K

Cathode-Ray Tube: 80° deflection 7 inch
180CZB22(K)R/180CZB22(K)G/
180CZB22(K)B

Power Input: 120 volts AC, 60Hz

Power Consumption: 230 watts - Maximum
160 watts - Operating

Antenna Impedance: 75 ohm Unbalanced
VHF/UHF/CATV

Receiving Channel:

	CH
VHF	2-13
EXT. Mid	(A-2)-(A-1),4
CATV Mid	A-I
CATV Super	J-W
CATV Hyper	(W+29)-(W+53)

Intermediate Frequency: Picture I-F Carrier 45.75 MHz
Sound I-F Carrier 41.25 MHz
Color Sub Carrier 42.17 MHz

Video Input: 1 Voltp-p 75 ohm

Video Output: 1 Voltp-p 75 ohm

Audio Input: 0.4 volt rms, 40 k ohm

Stereo Audio Output: 0.4 volt rms, 1 k ohm

Audio Output Power: Front — 12 watts rms per channel, 8 ohm impedance. Max output — 15 watts
Rear — 5 watts per channel, 8 ohm impedance. Max output — 7 watts.

Anode Voltage: 30.0 kV
(Zero Beam Current)

Brightness: 500 ft-Nominal - 46"
420 ft-Nominal - 50"
(Peak White)

Speakers: 2 Woofers - 5 inch
(12 cm) round
2 Tweeters - 2 inch
(5 cm) round

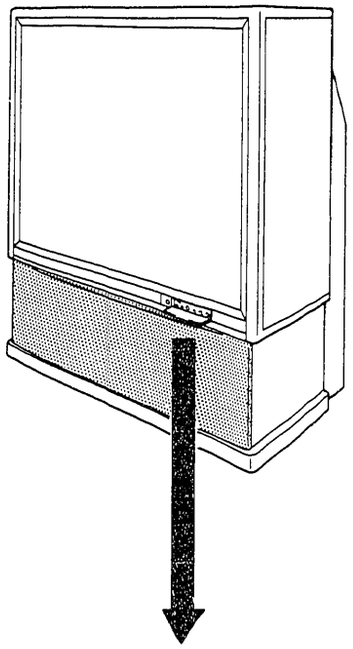
Dimension:	**46UX16B/17K**	**50UX18B/19K**
Height (in.)	49-1/2	51-7/8
Width (in.)	41-1/8	44-1/8
Depth (in.)	27	27-1/2
Weight (lbs.)	221	250

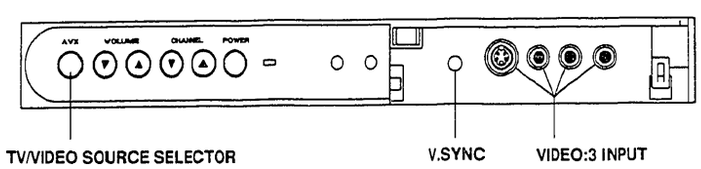
Circuit Board Assemblies:
CPT (B) P.C.B.
CPT (G) P.C.B.
CPT (R) P.C.B.
Convergence
Correction P.C.B.
Signal P.C.B.
Deflection/Power Supply P.C.B.
SP Terminal P.C.B.
Control P.C.B.
Surround P.C.B.
MTS P.C.B.
P-in-P Sub P.C.B.
Terminal P.C.B.
S. contrast P.C.B.
V.M. P.C.B.

CIRCUIT PROTECTION

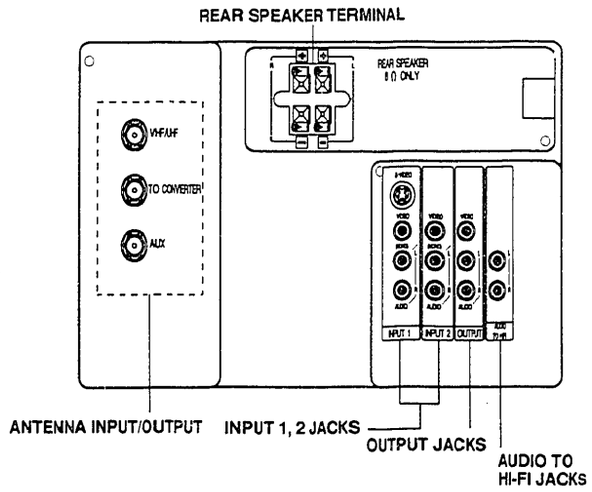
Fuse (or Device)	Circuit Protected	Physical Location
F601 1.6A/125V DC	Vertical	Power/Defl. Circuit Board
F901 5A/125V AC	Main Fuse	Power/Defl. Circuit Board
F903 5A/125V DC	Main Fuse	Power/Defl. Circuit Board
F931 3A/125V DC (MINIFUSE)	Rear Audio Output	Power/Defl. Circuit Board
F932 4A/125V DC	Vertical	Power/Defl. Circuit Board
F933 3A/125V DC (MINIFUSE)	Convergence	Power/Defl. Circuit Board
F934 3A/125V DC (MINIFUSE)	12V Supply	Power/Defl. Circuit Board
F935 4A/125V DC	11V Supply	Power/Defl. Circuit Board
F936 3A/125V DC (MINIFUSE)	Front Audio Output	Power/Defl. Circuit Board
F937 1.6A/125V DC	130V (+B) Supply	Power/Defl. Circuit Board

GENERAL INFORMATION





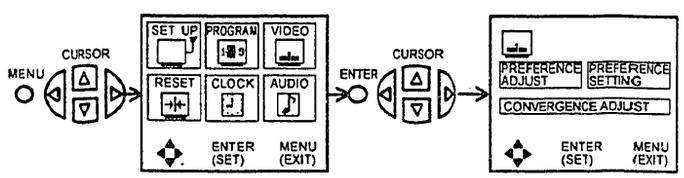
Control Panel
Fig. 3



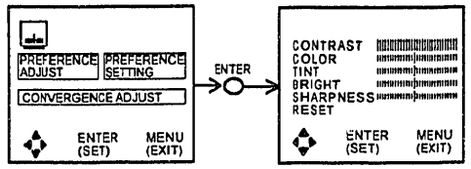
Rear Connections Panel
Fig. 4

ADJUSTING FOR PICTURE AND SOUND FUNCTIONS

Select VIDEO to adjust picture settings, improve picture quality, and to adjust convergence.



PREFERENCE ADJUST Use this feature to adjust contrast, color, etc.



Press the CURSOR buttons to select and make adjustments.
The function to be adjusted will be in magenta.

CONTRAST — Use this function to change the contrast between black and white levels in the picture. This adjustment will only affect the picture when the PICTURE SETTING AI is OFF.
(Use PREFERENCE SETTING to turn AI off.)

TINT — Use this function to adjust flesh tones so that they appear natural.

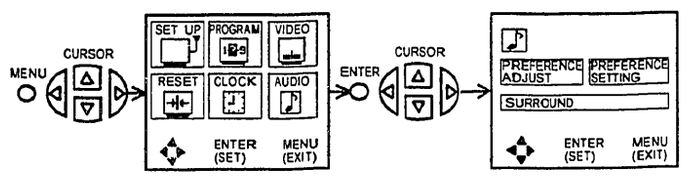
COLOR — Use this function to adjust the level of color in the picture.

BRIGHT — Use this function to adjust overall picture brightness.

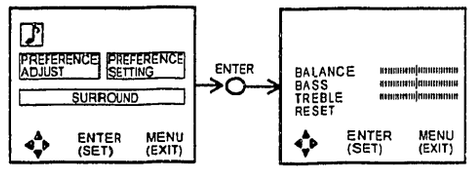
SHARPNESS — Use this function to adjust the amount of fine detail in the picture. This adjustment will only affect the picture when PICTURE SETTING AI is OFF.
(Use PREFERENCE SETTING to turn AI off.)

RESET — When RESET is selected, press ENTER to return video adjustments to factory preset conditions.

Select AUDIO to adjust the TV to your preference, to improve the sound quality, and to select special sound effects.



PREFERENCE ADJUSTMENT Use this to set balance, bass, and treble.



Press the CURSOR buttons to select and make adjustments. The function to be adjusted will be in magenta.

BALANCE — This function will control the left to right balance of the TV internal speakers, the AUDIO TO HI-FI output, and the surround speakers.

BASS — This function controls the low frequency audio to all speakers.

TREBLE — This function controls the high frequency audio to all speakers.

RESET — When RESET is selected, press ENTER to return audio adjustments to factory preset conditions.

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SELF CHECK REPAIR CODES

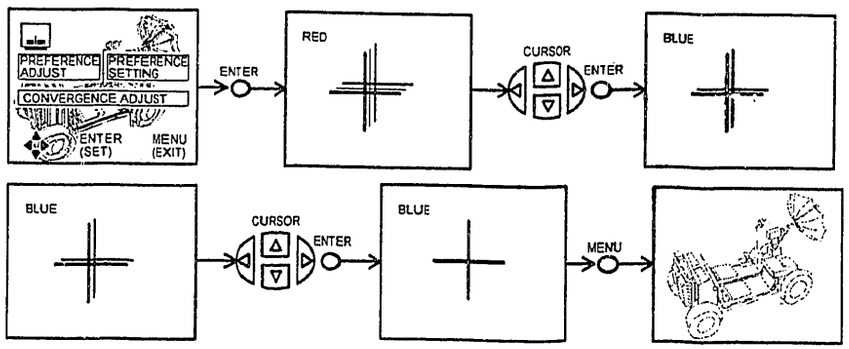
Press the AVX and POWER buttons on the control panel at the same time.

CODE	DETECTION CONTENTS	DETECTION TIME	REMARK
40	Abnormal horizontal deflection	- - -	- - -
41	Flyback Transformer loading on 12V line	- - -	- - -
50	Power Relay off	- - -	Abnormal condition causing relay to turn off
10	Check for PLL lock	Not locked in 2 sec.	During selection time
11	Check for AFC operation	Not finished in 2 sec.	During selection time
60	Check for AC input	At uP reset time	AC input (50/60Hz) not detected at reset time
31	Check IC0001 operation	At uP reset time	Check for out of range operation

Note: Code 10 or 11 may appear if TV is turned on without an antenna source connected.

CONVERGENCE ADJUSTMENT

Press MENU on the remote control for the On Screen Display. Use the Cursor buttons to select VIDEO and then press ENTER.



Press the CURSOR ▲, ▼ to move the color displayed up or down.
Press the CURSOR ◀, ▶ to move the color displayed left or right.
Press ENTER to change the color.
Press MENU to exit.

CAUTIONS WHEN CONNECTING/DISCONNECTING THE HV CONNECTOR

Perform the following when the HV connector (anode connector) is removed or inserted for CPT replacement, etc.

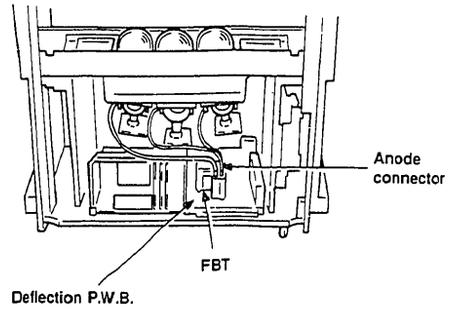


Fig. 5

During Removal

1. Insert a small flat-bladed screwdriver (adjustment screwdriver: 5-7 mm wide and 0.2-0.3 mm thick) into section Ⓐ in Fig. 6 and then push it in the direction of arrow Ⓑ. The lock will release with a click. (The state in Fig. 8 (1) will change to that in Fig. 8 (2).)

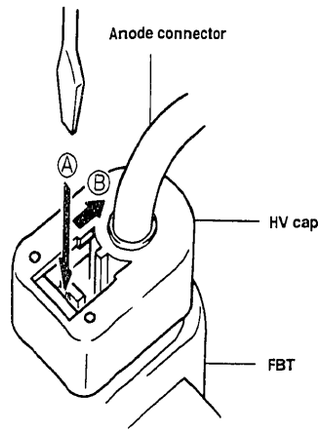


Fig. 6

2. Remove the HV cap and remove the anode connector (Fig. 7).

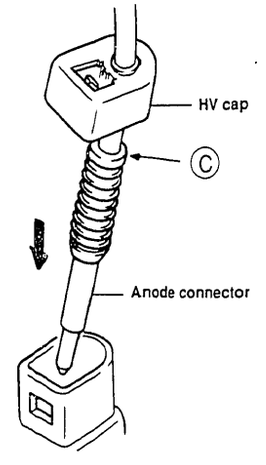
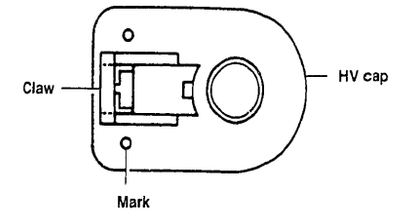


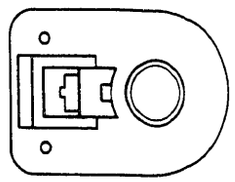
Fig. 7

During Insertion

1. Insert the anode connector deep into the FBT (to section Ⓒ in Fig. 7) and then push the HV cap into the FBT until it clicks.
2. Make sure the connector is securely inserted. (Check that the claw is at the mark on the HV cap shown as in Fig. 8 (1).)



(1) Lock on
(When connector is inserted)



(2) Release
(When connector is removed)

Fig. 8

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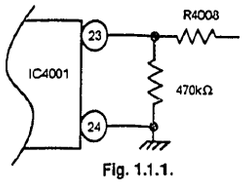
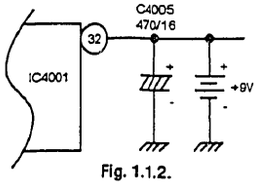
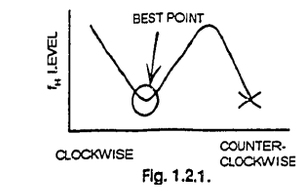
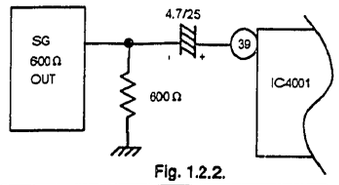
1. ASSEMBLED P.W.B. ADJUSTMENT (MTS P.W.B.)

MTS Demodulating Circuit Adjustment

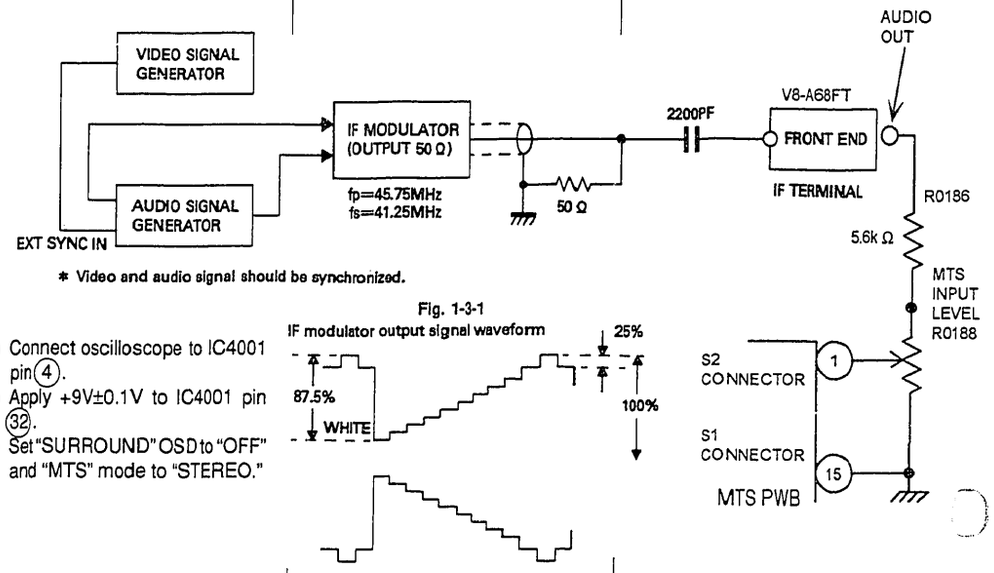
1.1. Stereo VCO Adjustment (R4007)

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Set R4114 fully counterclockwise (2) Set S2-connector pin ① to MTS GND (3) Connect 470kΩ resistor across IC4001 pin (23) and (24) (4) Connect a frequency counter to IC4001 pin (41) . Use 1:1 probe. Probe standard: $R_i \geq 1M\Omega$ $C_i \leq 15pF$ (5) No signal input at IC4001 pin (39). (6) Apply +9.0V ±0.1V to IC4001 pin (32).	(1) Adjust R4007 to 15.73kHz ±0.01kHz. (2) Remove 470kΩ resistor after adjustment.	 Fig. 1.1.1.  Fig. 1.1.2.

1.2. Filter Adjustment (R4114)

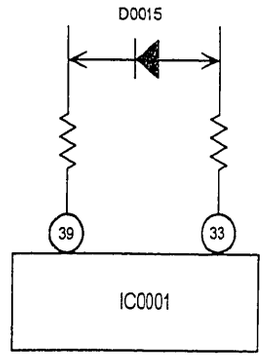
Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Set R4114 fully counterclockwise (2) Apply signal to IC4001 pin (39). Sound Generator output impedance = 600Ω f = 15.73kHz Sinusoidal V = 100Vrms (3) Connect oscilloscope to IC4001 pin (35). (4) Apply +9.0V ±0.1V to IC4001 pin (32).	(1) Adjust R4114 so that the waveform at pin (35) is minimum as shown.	 Fig. 1.2.1.  Fig. 1.2.2.

1.3. Separation Adjustment (R4009, R4010)

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Apply the signal to F/E IF input terminal of the signal P.W.B. using the jig shown below.  * Video and audio signal should be synchronized. Fig. 1-3-1 (2) Connect oscilloscope to IC4001 pin (4). (3) Apply +9V±0.1V to IC4001 pin (32). (4) Set "SURROUND" OSD to "OFF" and "MTS" mode to "STEREO." Fig. 1-3-2		
IF modulator output level and P/S P=106±3dB μ (50Ω termination) S LEVEL: –3dB with respect to P S/N ratio of the F/E video output should be 45dB or less at this time. Sound input signals • Noise reduction encoder: ON • Stereo signal: ① R=0 (L only), 300 Hz, 30% modulation (Note 2) ② R=0 (L only), 3 KHz, 30% modulation • Monaural signal: ③ Monaural, 400Hz, 100% modulation • Sap signal: ④ Sap, 30% modulation (Note 2)	(1) Select the audio input signal (3) and adjust R0188 so that the reading of the AC voltmeter Vo=150mVrms ±5mVrms. (Refer to Chassis Assembly Adjustment, Input level adjustment 1.3.1 (R0188). (2) Select sound input signal (1) and adjust R4009 for 300Hz minimum. (3) Select sound input signal (2) and adjust R4010 for 3kHz minimum. (4) Repeat (1) - (3). Adjust within +1dB of minimum point.	• No pilot signal. • Noise reduction is off mode. • Separation point may deviate if input level is not regularly adjusted. (Note 1) The frequency characteristic of the sound modulator must be ±1% from 50Hz to 100kHz (Note 2) Turn off noise reduction (NR), set 30% modulation, then turn (NR) on. Set modulation at audio signal generator output, not IF modulator output.

2. CHASSIS ASSEMBLY ADJUSTMENT (SIGNAL BLOCK)

2.1. Memory Initialization

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Refer to signal printed circuit board to locate D0015 on copper pattern side. (Look for cut-out section of IC0001 shield.)	(1) Connect jig diode D0015 (1SS270) across IC0001 pin (33) and (39) for one second, then remove. (2) A reset tone, "beep" will be heard from the left speaker and channel "03" will be displayed on the OSD.	The TV will be set to factory shipping conditions.  Fig. 2.1.1. Do not unplug set or press any buttons during this operation.

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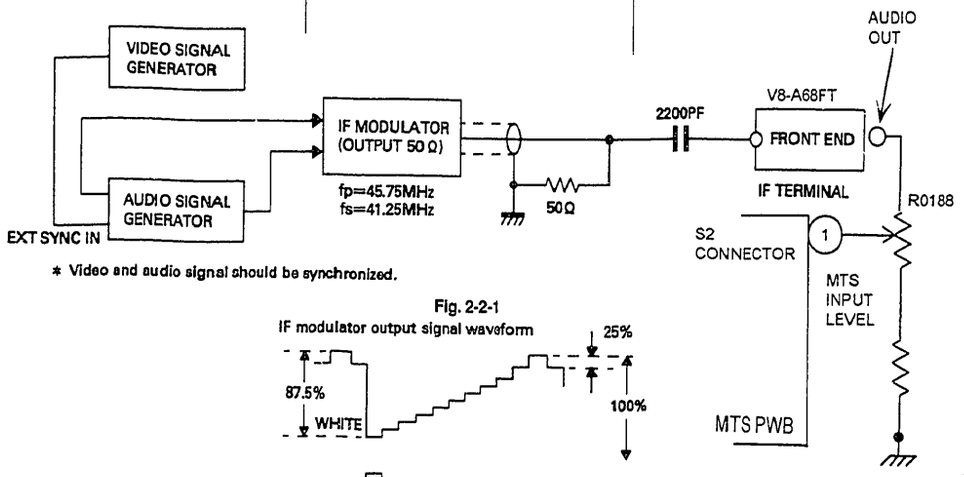
2.2. MTS Demodulating Circuit Adjustment

2.2.1 Input level adjustment (R0188)

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Apply the signal to F/E IF input terminal of the signal P.W.B. using the jig shown below.		
IF modulator output level and P/S P=106±3dB μ (50Ω termination) S LEVEL: –3dB with respect to P S/N ratio of the F/E video output should be 45dB or less at this time. Audio modulation contents • Noise reduction encoder: ON • Stereo signal: ① R=0 (L only), 300 Hz, 30% modulation (Note 2) ② R=0 (L only), 3 KHz, 30% modulation • Monaural signal: ③ Monaural, 400Hz, 100% modulation • Sap signal: ④ Sap, 30% modulation (Note 2)	(1) Select the audio input signal③ and adjust R0188 so that the reading of the AC voltmeter Vo=150mVrms ±5mVrms.	• No pilot signal. • Noise reduction is off mode. (Note 2) Turn off noise reduction (NR), set 30% modulation, then turn (NR) on. Set modulation at audio signal generator output, not IF modulator output.



* Video and audio signal should be synchronized.

Fig. 2-2-1

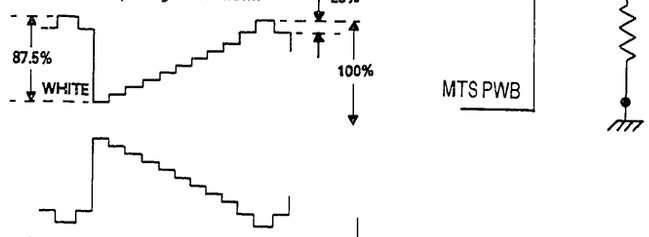


Fig. 2-2-2

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(2) Connect the AC voltmeter (Vo) to pin (39) of IC4001 via the jig shown below.		
(Use the VP950C AC voltmeter made by Matsusita or equivalent.) (3) Apply the D.C. +9V±0.1V to IC4001 pin (32). (4) Connect the D.C. +9V±0.1V. (F/E: +B.)		

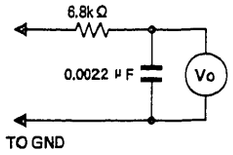


Fig. 2-2-3

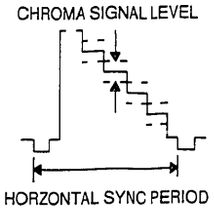
2.2.2. Separation check

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Connect the same jig as that input level adjustment. (Disconnect the AC voltmeter connected to IC4001. (2) Connect the oscilloscope to pin (3) : (L) and pin (4) : (R) of IC4001. (3) Same as in items 2-2-1. (3) and (4). (4) Set the MTS OSD to STEREO.	(1) Select the audio input signal① and check that L/R separation of 300Hz component is 15dB or more. (2) Select the audio input signal② and check that L/R separation of 3kHz component is 15dB or more. (R<L)	When the audio input signal①/② is received, "STEREO" should be displayed on the screen. (Note 1) Use an audio modulator with frequency characteristics of 50Hz to 100kHz ±1%.

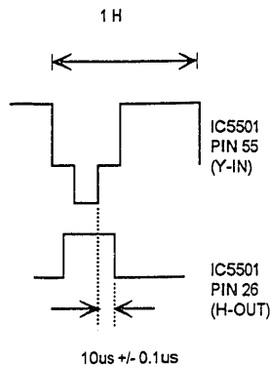
2.2.3. SAP reception check

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Same as in items 2-2-2 (1)~(4). (2) Set the MTS mode to SAP.	(1) Select the audio input signal①. The output level at this time is represented by VST. (2) Select the audio input signal④. Check that the output level at this time is almost the same as VST. ("SAP" should be displayed at this time.)	(Note 2) Turn the noise reduction encoder (NR) off and set to 30% modulation and then turn the NR on. Set the modulation using the output from the low frequency signal generator and leave the audio modulation VR of the IF modulator as it is.

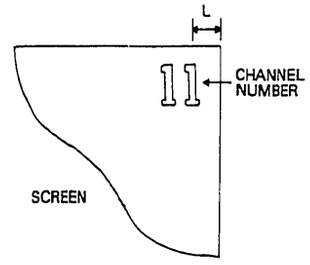
2.3. Comb filter adjustment

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Receive the color bar signal at the regular tuning point. (2) Connect the oscilloscope to the emitter of Q3503. (3) Set the brightness to Max (+31) and set the other controls to typ (0). (4) Set the AI to OFF.	(1) Check that the residual signal level is 50mVp-p or less. (Note) The chrome signal level is the point shown below.  Fig. 2-3.	• Use a 10:1 probe. • Use an oscilloscope with a 20mV/ div resolution.

2.4. Horizontal coarse AFC adjustment

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Receive the reverse cross-hatch pattern signal. (Cross-hatch lines are black.) (2) Connect the oscilloscope to IC5501 pin (55) (Y-In) and pin (26) (Horizontal pulse out).	(1) Adjust R5564 (AFC) for 10µs delay between pin (55) and (26).	 Fig. 2-4

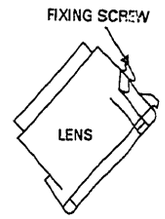
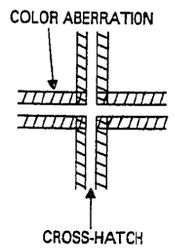
2.5. On-screen display position check

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Receive the TV broadcast signal. (2) Press the RECALL button of the remote control transmitter to display the channel number.	(1) Check that the right end of the displayed number is at the position shown below.  Fig. 2-5	L = 120 ± 10 mm

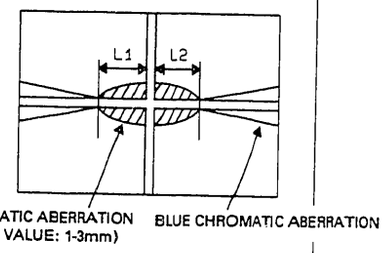
3. FINAL ASSEMBLY ADJUSTMENT

3.1. OPTICAL SYSTEM ADJUSTMENT

3.1.1. Focus adjustment

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) The set can face in any direction, west, east, north or south. (2) Receive the cross-hatch pattern signal. CONTRAST: MAXIMUM BRIGHTNESS: CENTER (3) The electrical focus adjustment should have been completed. (4) The centering DY inclination should have been adjusted.	(1) Loosen the fixing screw on the lens cylinder so that the lens cylinder can be turned. (Be careful not to loosen too much. If it is loosened too much, rattling when tightening becomes greater and the focus may drift.) After completing steps (5), (6) and (7) below, tighten the fixing screws for each lens with a torque of 7 ~ 12kg/cm. (2) Apply covers to 2 of R, G and B lenses, and project a single color on the screen and adjust in sequence. (The adjustment order of R, G and B is only an example.) (3) For each of the R, G and B lenses, observe the color aberration generated on the outer circumference of the cross-hatch bright line at the center section ±3 pitches vertically and horizontally from the center. (4) If the lens adjustment knob is turned clockwise, viewed from the front, the color aberration changes as follows.	(1) Fixing screw  Fig. 3-1-1 (2) Color aberration  Fig. 3-1-2

Lens	Change of color aberration
R lens	Orange → Crimson
G lens	Blue → Red
B lens	Purple → Green

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
	(5) In case of G lens Set to the point where the chromatic aberration switches from blue to red. If the chromatic aberration appearing all over the screen is not the same, observe the horizontal bright line at the center of the screen and set to the position where red chromatic aberration slightly appears (reference value: 1-3mm) within the cross-hatch pitches specified in Table below. When the red chromatic aberration appearing at both sides of the bright line is not equal, observe the side with larger chromatic aberration when adjusting.  Fig. 3-1-3	(3) Since the G light is very important for picture quality and performance, pay special attention in its adjustment. Note: Be careful not to touch the lens with your fingers when adjusting.

Set Size	Pitch between L1 & L2
46"	5.0 cross-hatch pitches
50"	6.0 cross-hatch pitches

Fig. 3-1-4

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Preparation for adjustment	Adjustment procedure	Remarks/Waveform
	(6) In case of R lens Set to the position where the chromatic aberration changes from orange to crimson. As shown below, observe the horizontal bright line at the center and set to the position where the crimson chromatic aberration slightly appears (reference value: 1-3mm) within the cross-hatch pitches specified in Table below. Change the signal and fine-adjust in the same way as the G lens.	(4) Setting to the center between orange and crimson is optimum.

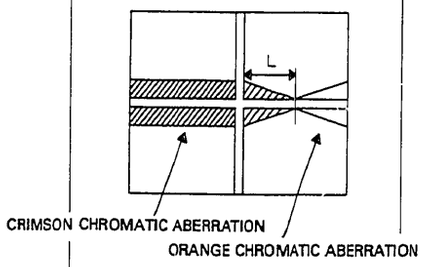
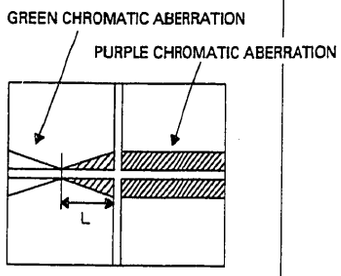


Fig. 3-1-5

Set Size	Pitch between L1 & L2
46"	5.0 cross-hatch pitches
50"	6.0 cross-hatch pitches

	(7) In case of B lens Set to the position where the chromatic aberration changes from purple to green.	(5) Setting to the center between purple and green is optimum.



3.2. SIGNAL SYSTEM ADJUSTMENT

3.2.1. White balance adjustment

(1) Screen adjustment
(2) High brightness white balance
(3) Low brightness white balance

Screen adjustment VRs		Drive adjustment VRs	
Red:	R804R	Red:	R813R
Green:	R804G	Green:	R813G
Blue:	R804B		

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Start adjustment 20 minutes or more after the power is turned on. (2) The vertical incident illumination on the screen shoule be 20 lux or less. (3) Receive the white raster. (4) Set the drive adjustment VRs (red and green) to their mechanical centers. (5) Turn the screen adjustment VRs (red, green blue) fully counter-clockwise. (6) Set the S5502 switch to the bottom as viewed from the front of the signal P.W.B. (Set to SERVICE side.)	(1) Gradually turn the screen adjustment VRs (red, green, blue) clockwise and set them where the red, green and blue slightly bright lines just appear evenly on the screen. (2) Return S5502 to the NORMAL side. (3) Set the brightness and black level controls to minimum and turn the sub brightness adjustment VR (R3540) and set so that the white raster can be seen slightly. (4) Set the brightness and black level controls to maximum. (5) Adjust the high brightness white balance using the drive adjustment VRs (red, green). (6) Set the brightness to 3ft-L amount or less using the brightness and black level controls. (7) Adjust the low brightness white balance using the screen adjustment VRs (red, green, blue). (Visually adjust.) (8) Check that high brightness white balance is obtained. If it does not, return to step (5).	Note: When adjusting the white balance, if the horizontal single raster is to be obtained using S5502, check that the screen adjustment VRs are turned fully counterclockwise. Since the phosphorescent surface of the CRT is likely to be burnt, be careful. White balance: 7500°K +0MPCD Color coordinate: X ..... 0.301 Y 0.310

3.2.2. Sub brightness adjustment (R3540)

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Start adjustment 20 minutes or more after the power is turned on. Receive the color bar signal. (2) Set the contrast and color controls to minimum. (3) Set the brightness to -6 (-3 position shown on the display). (4) The vertical incident illumination on the screen should be 20 lux or less.	(1) Adjust so that the points A1 and A2 sink to black and A3 slightly above it rises using the sub brightness adjustment VR (R3540).	

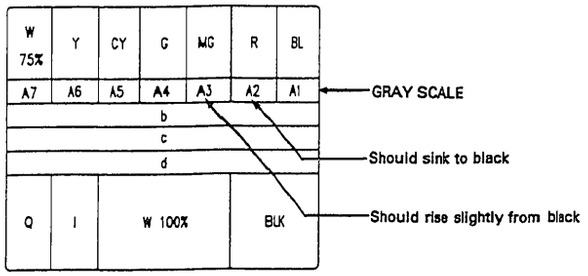
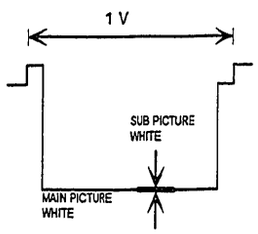
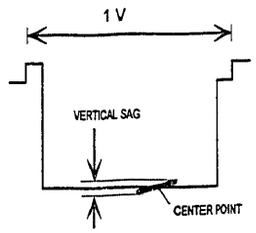


Fig. 3-2-2

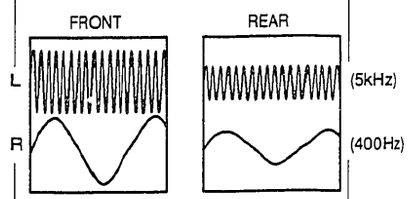
3.2.3. Sub picture adjustment (R350-B, R351-G, R352-R)

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Start adjustment after power is on for 20 minutes. (2) Use a white raster signal for adjustment. (3) Press "FREEZE" on the remote control to display the sub picture. (4) Set contrast to center, brightness minimum, AI off.	(1) Connect oscilloscope to TP802B and adjust R350 to match blue level of main and sub pictures. (2) Repeat for TP802G and R351 for green, TP802R and R352 for red. 	If the sub picture has a signal sag, adjust level at center point. 

3.2.4. Surround operation check

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
Input the following audio signals to the audio input of the VIDEO INPUT terminals. • When checking surround: L CH: 400Hz sine wave 475mVrms R CH: 5kHz sine wave 475mVrms • Set the AUDIO PREFERENCE SETTING for INT. SPEAKERS: ON. • Set the volume controls of FRONT and REAR to around their centers. • Set the BASS, TREBLE and BALANCE to TYP.		Note: Front waveform: Front speaker output of the set Rear waveform: Rear speaker output of the set

3.2.4.1 Surround off check

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
	(1) Set to SURROUND: OFF and check that the waveform shown below is obtained.  Fig. 3-2-4-1	Note: Rear amplitude will be about 1/2 of the Front amplitude.

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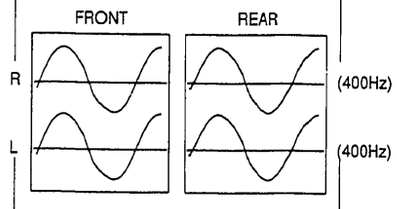
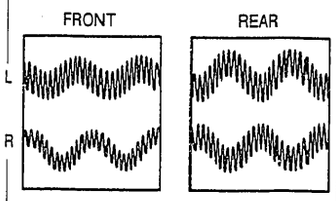
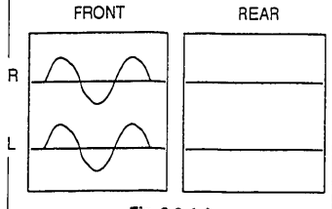
3.2.4.2 Surround off/monaural check

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
	Check that the following waveform is obtained. The amplitudes of 4 channels are equal.  Fig. 3-2-4-2	Note: Monaural check can be omitted.

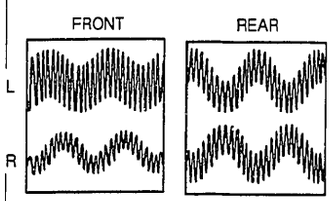
3.2.4.3 Matrix surround check

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
	(1) Set to SURROUND; MATRIX. • Check that the following waveforms are obtained. • Front: Check that the phases of R and L are different and 400Hz is superimposed on 5kHz. The amplitudes of R and L are different. • Rear: Check that the phases of R and L are opposite and 400Hz is superimposed on 5kHz. The amplitudes of R and L are different.  Fig. 3-2-4-3	

3.2.4.4 Matrix surround/monaural check

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
	Check that the following waveforms are obtained. • Front: R and L waveforms are almost equal. • Rear: R and L waveforms are almost equal.  Fig. 3-2-4-4	

3.2.4.5 Hall surround check

Preparation for adjustment	Adjustment procedure	Remarks/Waveform
	(1) Set to SURROUND: HALL. • Check that the following waveforms are obtained. • Front: Check that the phases of R and L signals are different and 400Hz is superimposed on 5kHz. • Rear: Check that the R and L are opposite and 400Hz is superimposed on 5kHz. The R and L amplitudes are equal.  Fig. 3-2-4-5	Note: Amplitude levels of front R and L are not even depending on the P.W.B.

3.2.4.6 Hall surround/monaural check

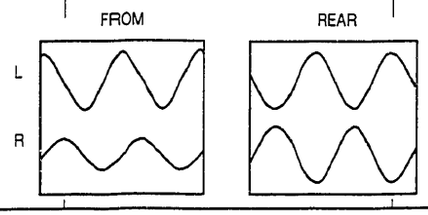
Preparation for adjustment	Adjustment procedure	Remarks/Waveform
	Check that the following waveforms are obtained. • Front: The phases of R and L are different. The amplitudes are different. • Rear: The phases of R and L are opposite. The amplitudes of R and L are equal. 	Note: The monaural check can be omitted. Amplitude levels of front R and L are not even depending on the P.W.B.

Fig. 3-2-4-6

3.2.4.7 Dolby surround check

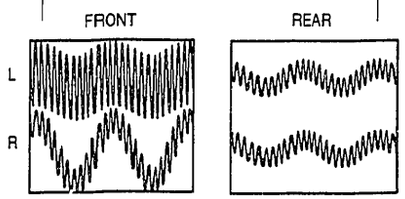
Preparation for adjustment	Adjustment procedure	Remarks/Waveform
	(1) Set to SURROUND: DOLBY. • Check that the following waveforms are obtained. • Front: 400Hz is superimposed on 5kHz. • Rear: R and L are the same signal and 400Hz is superimposed on 5kHz. 	Note: MODE: PRO-LOGIC CENTER: PHANTOM Set as above.

Fig. 3-2-4-7

3.2.4.8 Dolby surround/monaural check

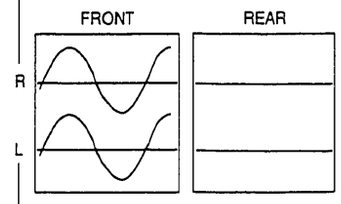
Preparation for adjustment	Adjustment procedure	Remarks/Waveform
	Check that the following waveforms are obtained. • Front: R and L are the same signal. • Rear: (Almost no output from both R and L. 	Note: Front side check can be omitted.

Fig. 3-2-4-8

3.2.5 Shoot balance adjustment (R3566)

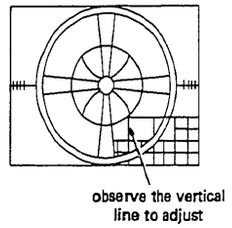
Preparation for adjustment	Adjustment procedure	Remarks/Waveform
(1) Receive the reverse cross-hatch pattern signal. (Cross-hatch lines are black.) (2) Set the video condition to factory reset. (3) Turn the shoot balance adjustment VR (R3566) fully counter-clockwise.	Gradually turn the shoot balance adjustment VR (R3566) clockwise and adjust so that the width of pre-shoot and over-shoot of the vertical line (black) shown below in the circle pattern are balanced. (Visually adjust.) 	Directly observe the screen by eye without using a mirror.

Fig. 3-2-5

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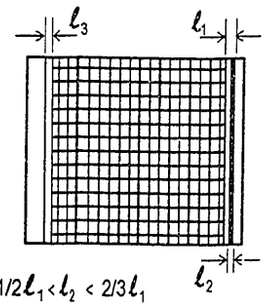
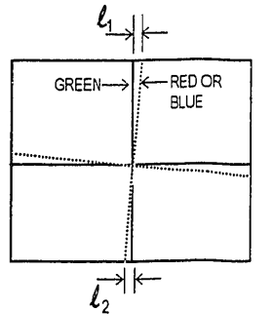
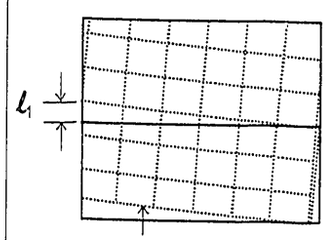
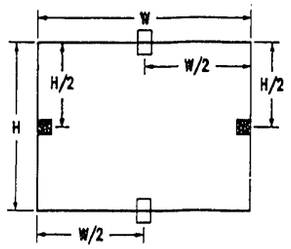
3.2.6. Horizontal AFC adjustment

Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
(1) Receive the reverse cross-hatch signal (cross-hatch lines are black). (2) Set CONTRAST to maximum BRIGHTNESS to center. (3) Lens focus should be completed. (4) Electrical focus should be coarse adjusted. (5) Dynamic convergence should be coarse adjusted. (6) Raster inclination should be completed.	(1) Project only green color. Cover R & B lenses or short 2P mini connectors on CPT P.W.B.'s. (2) Adjust H-size to minimum. R763 fully counterclockwise. (3) Adjust green centering magnet (located on DY) to shift picture left to display edge of raster. (4) Adjust AFC (R5564) so foldover of front porch occurs. Amount of foldover is 1/2 to 2/3 of front porch (ℓ_1).  $1/2\ell_1 < \ell_2 < 2/3\ell_1$ $\ell_1 = \ell_3$	(1) If raster edge cannot be seen, adjust GH-Pin (R2131) fully counterclockwise. (2) Front and back porch of video should be equal. (3) If adjustment is difficult with test pattern, follow adjustment 2-4.

3.3. DEFLECTION SYSTEM ADJUSTMENT
3.3.1. Raster inclination adjustment (Deflection yoke)

Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
(1) The set can face east or west. (2) Input the single cross test signal. (3) CONTRAST: MAX BRIGHTNESS: CENTER (4) The lens focus adjustment should have been completed. (5) The electric focus should have been coarse adjusted. (6) The dynamic convergence should have been coarse adjusted. Set the red horizontal skew (R2109) and blue horizontal skew (R2111) adjustment VRs to the mechanical center of their rotation angles.	(1) Apply covers to the R and B lenses and project only green light. (2) Tuen the G deflection yoke and adjust the vertical raster inclination. (3) Then, remove the cover of R or B lens and project red or blue light and green light together on the screen. (4) Turn the deflection yoke of R or B and set so that the inclination of R or B light with respect to the green light is as shown below on the top and bottom sides. (5) After raster inclination adjustment, fixing screw of DY should be screwed with 12±2 kg•cm torque.  $\ell_1, \ell_2 \leqq$ +/-2 mm Fig. 3-3-2	$\ell_1 \leqq$ +/-2 mm  CROSSHATCH (GREEN) Fig. 3-3-1

3.3.2. Raster position adjustment

Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
(1) The same as item 3-3-1 (1) ~ (6). (2) The raster inclination adjustment should have been completed. (3) Set red vertical skew (R2110) and blue vertical skew (R2112) to center position. (4) Raster inclination should be adjusted. (5) Horizontal AFC should be adjusted. (6) Apply marking using the tape, etc. at the positions on the screen as shown in Fig. 3-3-2.  Fig. 3-3-2.	(1) Apply covers to the R lens and B lens, and project only green light on the screen. (2) Use the green centering magnet and adjust so that the vertical and horizontal lines of the cross pattern match the position where the markings have been applied. (3) Then remove the cover of R lens or B lens, and project the red or blue light and green light on the screen. (4) Turn the R or B centering magnet to match the color with the green light.	Note: Spec for green centering vertical direction ±3mm horizontal direction ±2.5mm Center of test pattern with respect to geometrical center of screen: horizontal within 30 mm vertical within 20mm Red and Blue centering with respect to green is ±2mm in both horizontal and vertical directions.

3.3.3. Pincushion distortion and keystone distortion correction (Refer to Figs. 3-4-3 and 3-4-4)

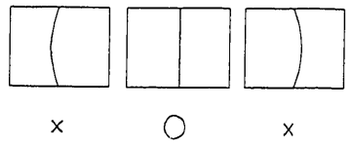
Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
(1) The screen can face any direction, north, south, east and west. (2) Display the cross-hatch pattern signal. (3) The focus adjustment of the G lens should have been completed. (4) The G raster (deflection yoke) inclination should have been adjusted. (5) The vertical amplitude and horizontal amplitude should have been coarse adjusted.	(1) Project only G on the screen using any one of following procedures. (a) Apply covers to the R and B lenses. (b) Short-circuit 2P sub mini connectors plug pins of the R and B CPT P.W.B. (2) Adjust the horizontal line of the G according to the procedure shown in Table 3-1. (3) Adjust the vertical line of the G according to the procedure shown in Table 3-2.	(1) The positions of the adjustment VRs are shown in Fig. 3-4-4. The movement of the bright line corresponding to each VR is shown in Fig. 3-4-3. (2) After this adjustment, check the raster position, vertical amplitude and horizontal amplitude of the G and adjust finally.

Table 3-1. The pincushion and keystone distortion correction of the horizontal green line (refer to Figs. 3-4-3 and 3-4-4).

No.	Adjustment item		Adj. VR	Adjustment details
1	Upper/lower horizontal line	Upper/lower pincushion distortion phase GV-PIN-PHASE	R2372	(1) Set the upper and lower line to the barrel pattern using the GV-PIN (R2132) and GV-U-PIN (R2138). (2) Turn R2372 and adjust so that the curves of the upper and lower lines are balanced on the left and right at the center of the screen. Fig. 3-3-3-1 (3) At this time, perform the following adjustments together. (a) Remove the inclination of the lower horizontal line using the GV-KEY (R2134). (b) Remove the inclination of the upper horizontal line using the GV-U-KEY (R2136).
2	Lower horizontal line	Upper/lower pincushion distortion GV-PIN	R2132	Correct the bow distortion of the lower horizontal line and make it a straight line.
3		Upper/lower keystone distortion GV-KEY	R2134	Remove the inclination of the lower horizontal line.
4	Upper horizontal line	Upper pincushion distortion GV-U-PIN	R2138	Correct the bow distortion of the upper horizontal line and make it a straight line.
5		Upper keystone distortion GV-U-KEY	R2136	Remove the inclination of the upper horizontal line.

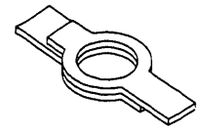
Note 1. Adjustment procedure of the horizontal line (1) Phase (R2372), (2) Lower and then (3) Upper line.
Note 2. Adjust repeatedly as occasion demands.

Table 3-2. The pincushion and keystone distortion correction of the vertical green line (refer to Figs. 3-4-3 and 3-4-4).

No.	Adjustment item		Adj. VR	Adjustment details
1	Center vertical line	Left/right pincushion distortion phase GH-PIN-PHASE	R2183	(1) Approximately correct the bow distortion at both the left and right sides using GH-PIN (R2131) and GH-L-PIN (R2137). (2) Turn R2183 to correct the bow distortion of the center vertical line and to make it a straight line.  × ○ × Fig. 3-3-3-2
2	Right vertical line	Left/right pincushion distortion GH-PIN	R2131	Correct the bow distortion of the right side vertical line and make it a straight line.
3		Left/right keystone distortion GH-KEY	R2133	Remove the inclination of the vertical line on the right side.
4	Left side vertical line	Left pincushion distortion GH-L-PIN	R2137	Correct the bow distortion of the left side vertical line and make it a straiget line.
5		Left keystone distortion GH-L-KEY	R2135	Remove the inclination of the vertical line on the left side.

Note 1. Adjustment procedure of the vertical line (1) Phase (R2183), (2) Lines on right and then left side.
Note 2. Adjust repeatedly as occasion demands.

3.3.4.1. Beam alignment

Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
(1) Adjust at least 30 minutes after turning on power switch. (2) The static convergence data should be cleared (see section 2-1). (3) Raster inclination, centering, horizontal and vertical amplitudes and optical focus adjustment should be completed. (4) Contrast: Max. Other items: Typ. (5) Receive cross-hatch signals. (Use of internal cross-hatch signals allowed.) (6) Short-circuit all metal parts (metal fittings, centering magnet) installed on the projection tubes to GNDs of the projection tubes. Since metal parts are charged with electricity, shocks may be caused if they are not short-circuited.	(1) Green (G) tube beam alignment adjustment. Short-circuit 2P subminiature connector plug pins of Red (R) and Blue (B) on the CPT boards and project only Green (G) tube. (2) Put Green (G) tube beam alignment magnet to the cancel state as shown below.  The state that long and short knobs of the 2P magnet are aligned. Fig. 3-3-4-2 (3) Turn the Green (G) static focus (Focus Pack) counterclockwise all the way and make sure of position of cross-hatch center on screen. (4) Turn Green (G) static focus (Focus Pack) clockwise all the way. (5) Turn two magnets forming alignment magnet in any desired direction and move cross-hatch center to position found in (3). (6) If image position does not shift when Green (G) static focus (Focus Pack) is turned, Green (G) beam alignment has been completed. (7) If image position shifts when Green (G) static focus (Focus Pack) is turned, repeat (2)–(6). (8) Conduct beam alignment for Red (R) and Blue (B) in the same way. Red (R) focus: Focus Pack CP702 Blue (B) focus: Focus Pack CP702 (9) Upon completion of adjustment, fix beam alignment magnets with white paint.	Halo state. Blooming state.

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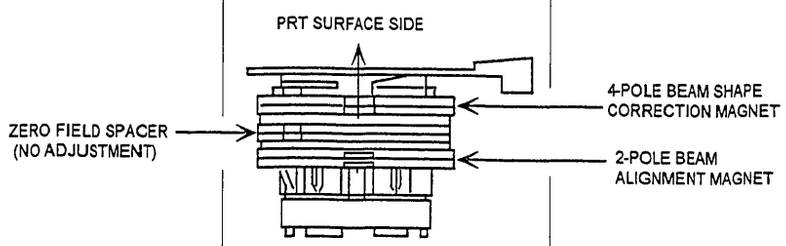
3.3.4.2. Beam shape adjustment

Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
(1) The beam alignment should have been completed. (2) The raster inclination, centering, horizontal/vertical amplitude and optical focus adjustments should have been completed. (3) Contrast: Max. Other time: Typ. (4) Input the dot signal.	(1) Green PRT beam shape adjustment. Short-circuit 2P submini connectors on Red and Blue CPT P.W.B.s to project only the Green beam (2) Turn the green static focus fully clockwise. (3) Make the dot at the screen center a true circle using the 4-pole magnet shown below. (4) Also adjust the Red and Blue PRT beam shapes according to the steps (1) to (3). (5) After the adjustment is completed, return R, G and B static VRs to the Just focus point.	Blooming



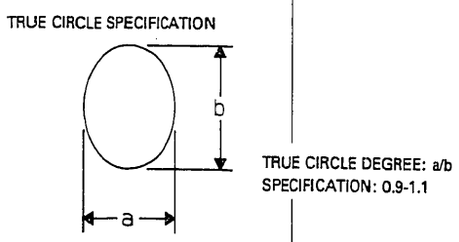


Fig. 3-3-4-3

3.3.4.3. Static focus adjustment

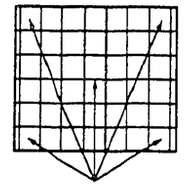
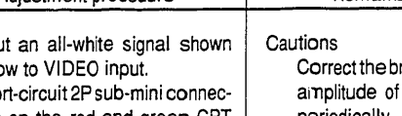
Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
(1) The raster inclination, centering, horizontal/vertical amplitude and optical/electrical focus beam alignment should have been adjusted. (2) The static convergence data should be cleared. (3) Contrast: More than MAX-5 STEP Brightness: Center (Reset point) (4) Receive the cross-hatch pattern signal. (5) Apply covers to the lenses of colors other than the color to be adjusted and project a single color.	(1) Red (R), Green (G) and Blue (B) static focus adjustment. Vary the static focus VR (focus pack CP702) and make the center of the cross-hatch pattern clearest. (2) Observe the corners of the picture and check that the focus does not get conspicuously worse. OBSERVING POINTS OF THE CORNER OF THE PICTURE  OBSERVING POINTS	

Fig. 3-3-4-4

3.3.5. Blue defocus adjustment

Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
(1) Optical and electrical focus adjustment should have been completed. (2) The convergence adjustment should have been completed. Coarse-adjustment is acceptable for convergence. (3) Brightness: Max. Other items: Typ.	(1) Input an all-white signal shown below to VIDEO input. (2) Short-circuit 2P sub-mini connectors on the red and green CPT P.W.B.s to display only the blue beam. (3) Turn the B static (Focus Pack) fully clockwise. (4) Measure the brightness at the center of the screen and turn the B static (Focus Pack) counterclockwise to adjust the brightness of blue as shown in Table below. (5) After the adjustment is completed, if blue exceeds the specification, turn and adjust focus so that the sticking out part of blue satisfies the specification.	Cautions Correct the brightness gauge and amplitude of the all-white signal periodically. The aperture angle of the brightness gauge is 1°.



UNEVENNESS SPECIFICATION: ±1cd/m²

Fig. 3-3-5

Defocus brightness specification

Screen Size	Brightness of Blue
46"	45 cd/m²
50"	38 cd/m²

Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
	Defocus sticking out specification Screen Size / Blue sticking out 46" / 2.0 mm 50" / 2.0 mm Condition: User controls are set to the initial set positions (for shipment) Measuring point Screen center	Use a cross-hatch pattern to check. (Select CONVERGENCE ADJUST from the VIDEO menu then press the "100" key.)

3.3.6. Vertical amplitude adjustment (R622)

Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
(1) Start adjustment more than 5 minutes after the power is turned on. (2) The pincushion distortion and the horizontal keystone distortion adjustment should have been completed. (3) Receive the broadcast signal. (4) Select the internal cross-hatch from the CONVERGENCE ADJUST menu, then press the "100" key on the remote control. (5) Set the contrast control to maximum and brightness contol to center. (6) Apply cover to the R and B lenses or short-circuit the 2P sub-mini plug pins to the R and B CPT P.W.B. and project only Green on the screen.	(1) Turn R622 and adjust as shown in Fig. 3-3-6.	

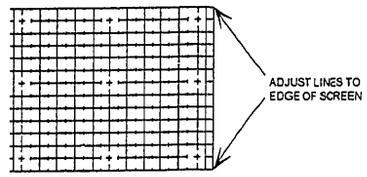


Fig. 3-3-6

3.3.7. Horizontal amplitude adjustment (R635)

Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
(1) The same as items 3-3-6 (1) ~ (6).	(1) Turn the size control VR (R635) and adjust so that the second vertical line of the cross-hatch pattern is set 15mm from the left edge of the screen and the last vertical line (line 15) is set to the right edge of the screen.	

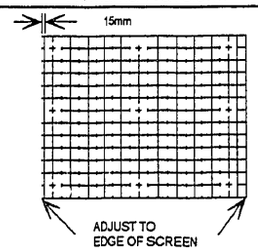
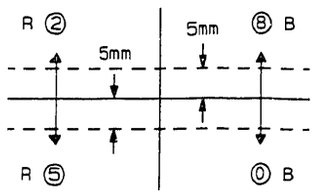
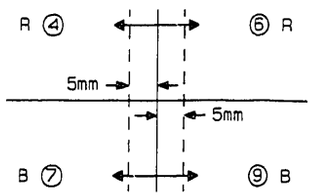


Fig. 3-3-7

3.4. CONVERGENCE ADJUSTMENT

3.4.1. Static convergence adjustment

Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
(1) The screen can face east or west. (2) Display the cross pattern signal or the cross-hatch pattern signal. (3) R, G and B lens focus adjustment and R, G and B raster inclination adjustment should have been completed. (4) The following adjustment for G raster should have been completed. (5) R and B raster position (centering magnet) adjustment should have been completed. (6) The dynamic convergence should have been coarse adjusted previously.	(1) Set to the CONVERGENCE mode using the MENU button of the remote control transmitter. (2) Check that the variable range of the static convergence adjustment is obtained as shown below using the cursor buttons of the remote control transmitter. (3) RV, BV  Fig. 3-4-1 RH, BH  Fig. 3-4-2 If the adjustment cannot be done, turn the centering magnets for R and B and re-adjust the R and B raster position.	(1) Refer to page 14 for static convergence adjustment. (2) Press the "100" key to display a complete cross-hatch. (3) Static convergence is set to standard mode during memory initialization.

3.4.2. Dynamic convergence adjustment

Preparation for Adjustment	Adjustment procedure	Remarks/Waveform
(1) The screen can face any direction, north, south, east and west. (2) Start adjustment 20 minutes or more after the power switch is turned on. (3) Display the cross-hatch pattern signal. (4) The following adjustments should have been completed for R, G and B. (a) Lens focus (b) Raster (deflection yoke) inclination (c) Raster position (5) The following adjustments should have been completed for the G raster. (a) Pincushion distortion (b) Keystone distortion (c) Vertical amplitude (d) Horizontal amplitude (6) Horizontal AFC adjustment should be completed. (7) Contrast: Max. Brightness: Center (8) Static convergence should be set to standard mode (memory initialization).	(1) R adjustment Match the R with the G following the procedure shown in Tables 3-4-1 and 3-4-2. At the same time, perform the static convergence adjustment of R. (2) B adjustment Match the B with the G following the procedure shown in Tables 3-4-1 and 3-4-2. At the same time, perform the static convergence adjustment of B. (3) Adjust repeatedly so that the amount of misconvergence of all colors is minimized. (a) If convergence of the vertical line at the right end is drifted, match it using R2193 (red) or R2195 (blue). (b) If converence of the vertical line at the left end is drifted, match it using R2194 (red) or R2196 (blue). (4) After adjustment, re-adjust R and B raster position. (5) After the static convergence adjustment and dynamic convergence adjustment are completed, fix the centering magnet (located on the R and B deflection yokes) using white paint.	(1) When adjusting the R, turn off the B using any one of the following procedures as required. (a) short-circuit the 2P subminiature connector plug pins on the B CPT P.W.B. (b) Apply cover to the B lens. (2) When adjusting the B, turn off the R using any one of the following procedures as required. (a) short-circuit the 2P subminiature connector plug pins on the R CPT P.W.B. (b) Apply cover to the R lens. (3) The position of VRs and the movement of the bright lines are shown in Fig. 3-4-3 and Fig. 3-4-4.

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Table 3-4-1. Dynamic convergence adjustment of the horizontal line (RED/BLUE)

No.	Adjustment item		Adj. VR RED	Adj. VR BLUE	Adjustment details
1	Horizontal center line	Vertical skew V-SKEW	R2110	R2112	Remove the inclination of the horizontal center line.
2		Vertical bow V-BOW	R2114	R2116	Correct the bow distortion of the horizontal center line and make it a straight line.
3	Lower horizontal line	Upper/lower pincushion distortion V-PIN	R2126	R2128	Correct the bow distortion of the lower horizontal line and make it a straight line.
4		Upper/lower keystone distortion V-KEY	R2118	R2120	Remove the inclination of the lower horizontal line.
5	Upper horizontal line	Upper pincushion distortion V-U-PIN	R2141	R2142	Correct the bow distortion of the upper horizontal line and make it a straight line.
6		Upper keystone distortion V-U-KEY	R2122	R2124	Remove the inclination of the upper horizontal line.
7	Upper/lower horizontal line	Vertical size V-SIZE	R2102	R2104	Match the upper/lower horizontal line with the green line by changing the vertical size.
8		Vertical linearity V-LIN	R2106	R2108	Match the upper/lower horizontal line with the green line by changing the linearity.

Note

1. Adjustment procedure of the horizontal lines (1) Center, (2) Lower, (3) Upper and then (4) Upper/Lower.
2. Accurately match the horiziontal center lines (red/blue) with the green line using the centering magnets (item 3-3-2).
3. Including centering magnets, adjust repeatedly as required.

Table 3-4-2. Dynamic convergence adfjustment of the vertical line (RED/BLUE)

No.	Adjustment item		Adj. VR RED	Adj. VR BLUE	Adjustment details
1	Vertical Center line	Horizontal skew H-SKEW	R2109	R2111	Remove the inclination of the vertical center line.
2		Horizontal bow H-BOW	R2113	R2115	Correct the bow distortion of the vertical center line and make it a straight line.
3	Right side vertical line	Left/right pincushion distortion H-PIN	R2125	R2127	Correct the bow distortion of the right side vertical line and make it a straight line.
4		Left/right keystone distortion H-KEY	R2117	R2119	Remove the inclination of the right side vertical line.
5		Horizontal size H-SIZE	R2101	R2103	Match the 3rd vertical line from the right end with the green line.
6		Horizontal linearity H-LIN	R2105	R2107	Match the 2nd vertical line from the right end with the green line.
7		Right end line linearity H-R-LIN	R2193	R2195	Match the right end line with the green line.

No.	Adjustment item		Adj. VR RED	Adj. VR BLUE	Adjustment details
8	Left vertical line	Left pincushion distortion H-L-PIN	R2129	R2130	Correct the bow distortion of the left side vertical line and make it a straight line.
9		Left keystone distortion H-L-KEY	R2121	R2123	Remove the inclination of the vertical line on the left side.
10		Left horizontal size H-L-SIZE	R2139	R2140	Match the left side vertical line with the green line.
11		Left end line linearity H-L-LIN	R2194	R2196	Match the left end vertical line with the green line.

Note

1. Adjustment procedure of the vertical lines (1) Center, (2) Right, and then (3) Left line.
2. Accurately match the vertical center lines (red/blue) with the green line using the centering magnets (item 3-3-2).
3. The right end/left end line adjustment VRs shown in Items 7 and 11 of above table, R2193, R2195, R2194 and R2196, should have been set to the mechanical centers previously.
4. Including centering magnets, adjust repeatedly as required.

MOVEMENT OF THE BRIGHT LINE

(This shows the movement of the bright line corresponding to the adjustment VR.)

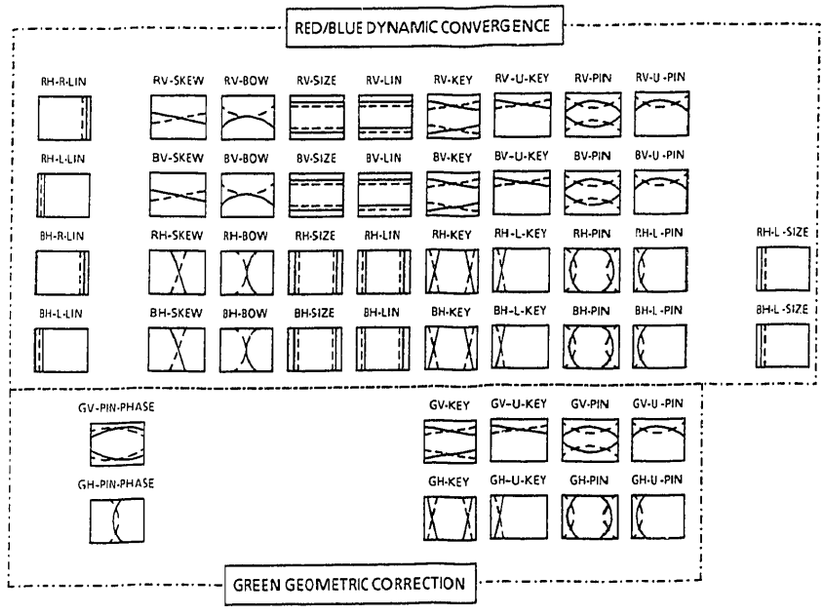


Fig. 3-4-3

LAYOUT OF THE ADJUSTMENT VR

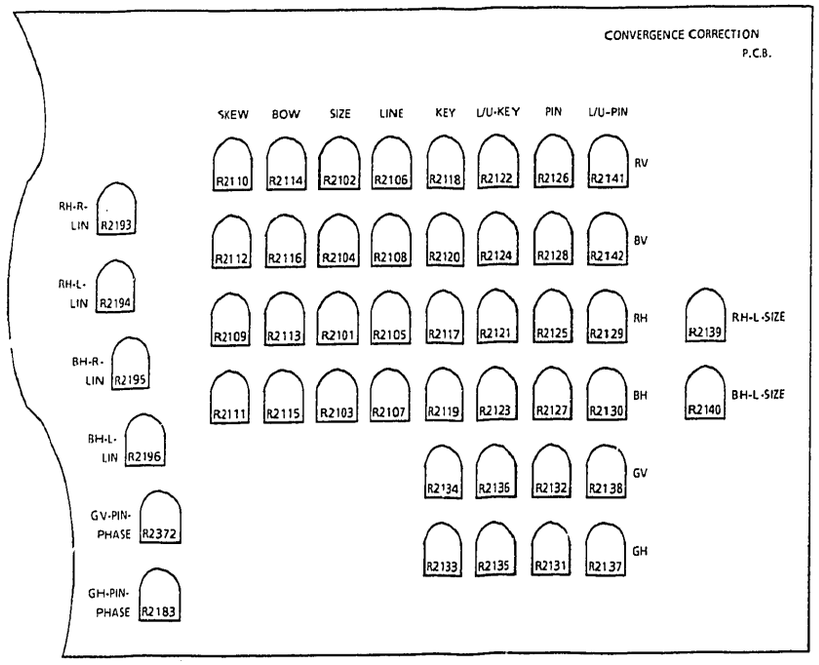
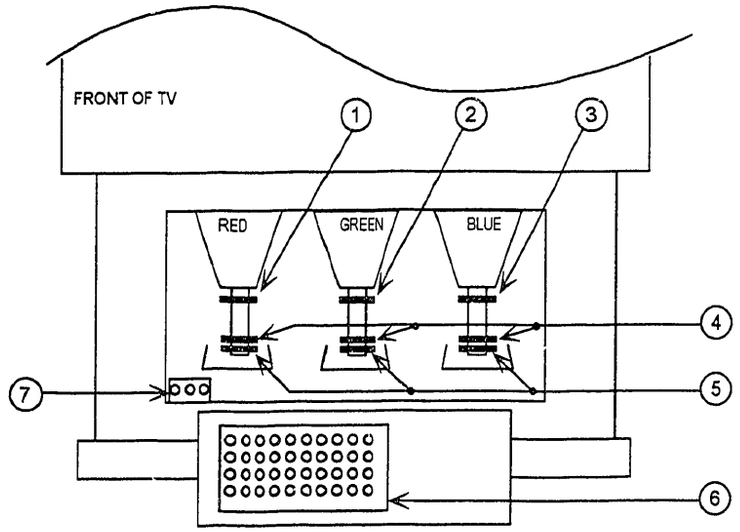


Fig. 3-4-4

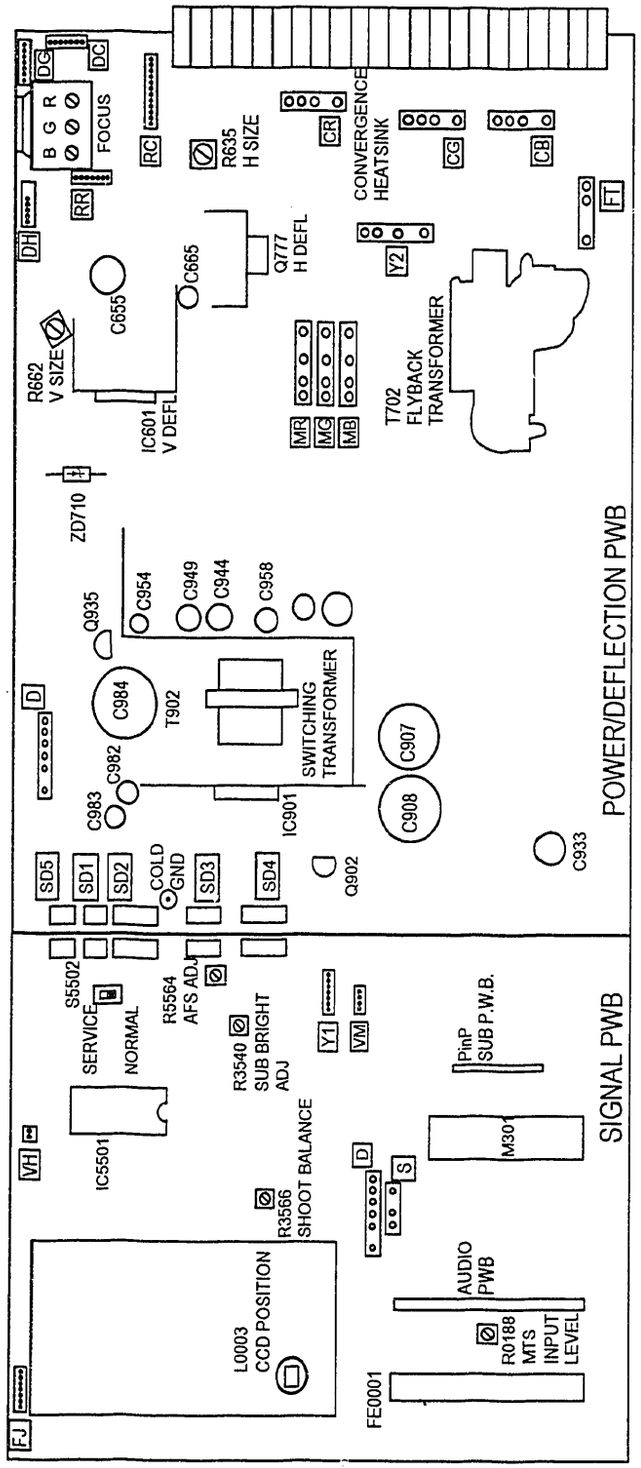
4. ADJUSTMENT POINT

4.1. CRT, cabinet locations

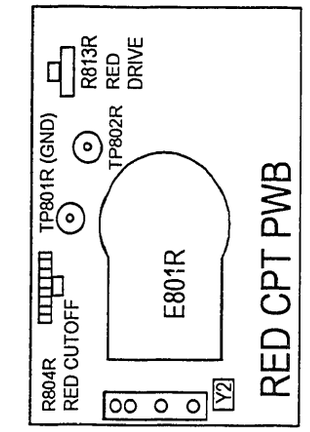


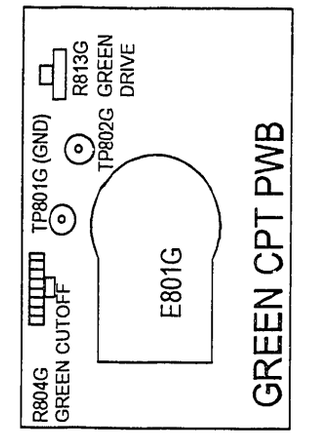
1. CENTERING MAGNET FOR RED PRT
2. CENTERING MAGNET FOR GREEN PRT
3. CENTERING MAGNET FOR BLUE PRT
4. 4-POLE MAGNET FOR BEAM FORM ADJUSTMENT
5. BEAM ALIGNMENT MAGNET
6. CONVERGENCE CORRECTION PWB
7. FOCUS PACK

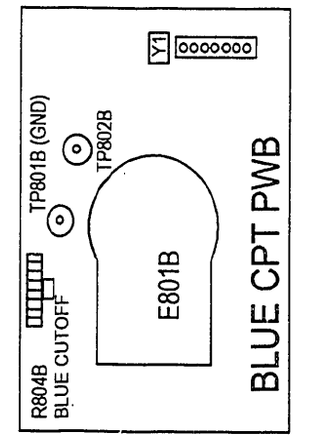
4.2. Signal P.W.B., power/deflection P.W.B. adjustment points

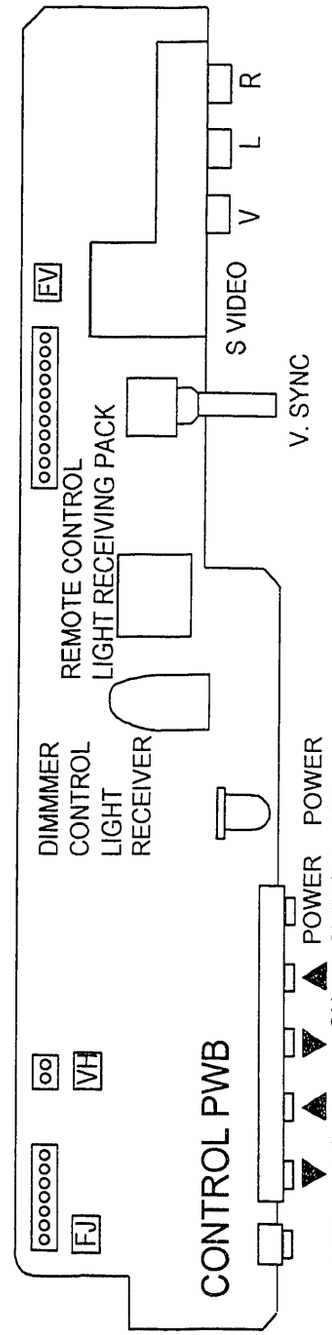


4.3. CPT P.W.B., control P.W.B. adjustment points









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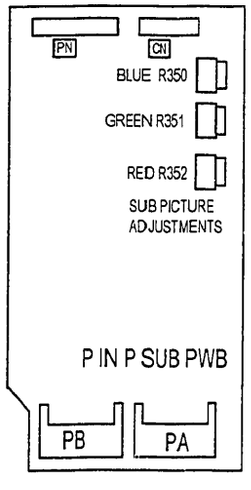
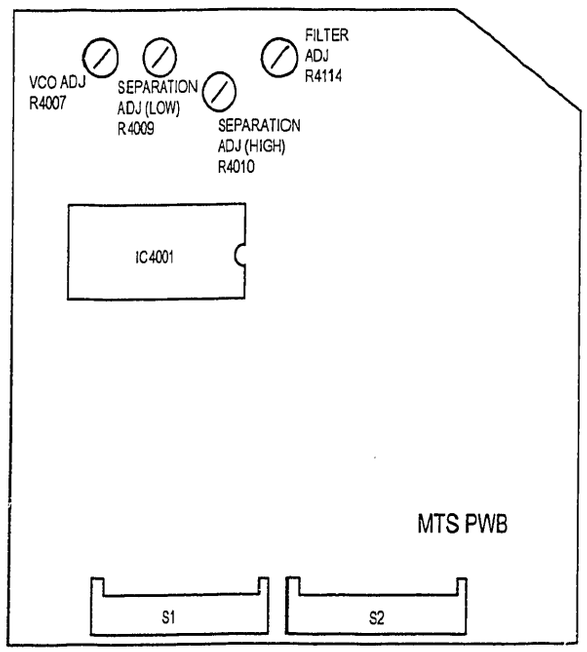
4.4. P-in-P sub P.W.B., MTS P.W.B. adjustment points





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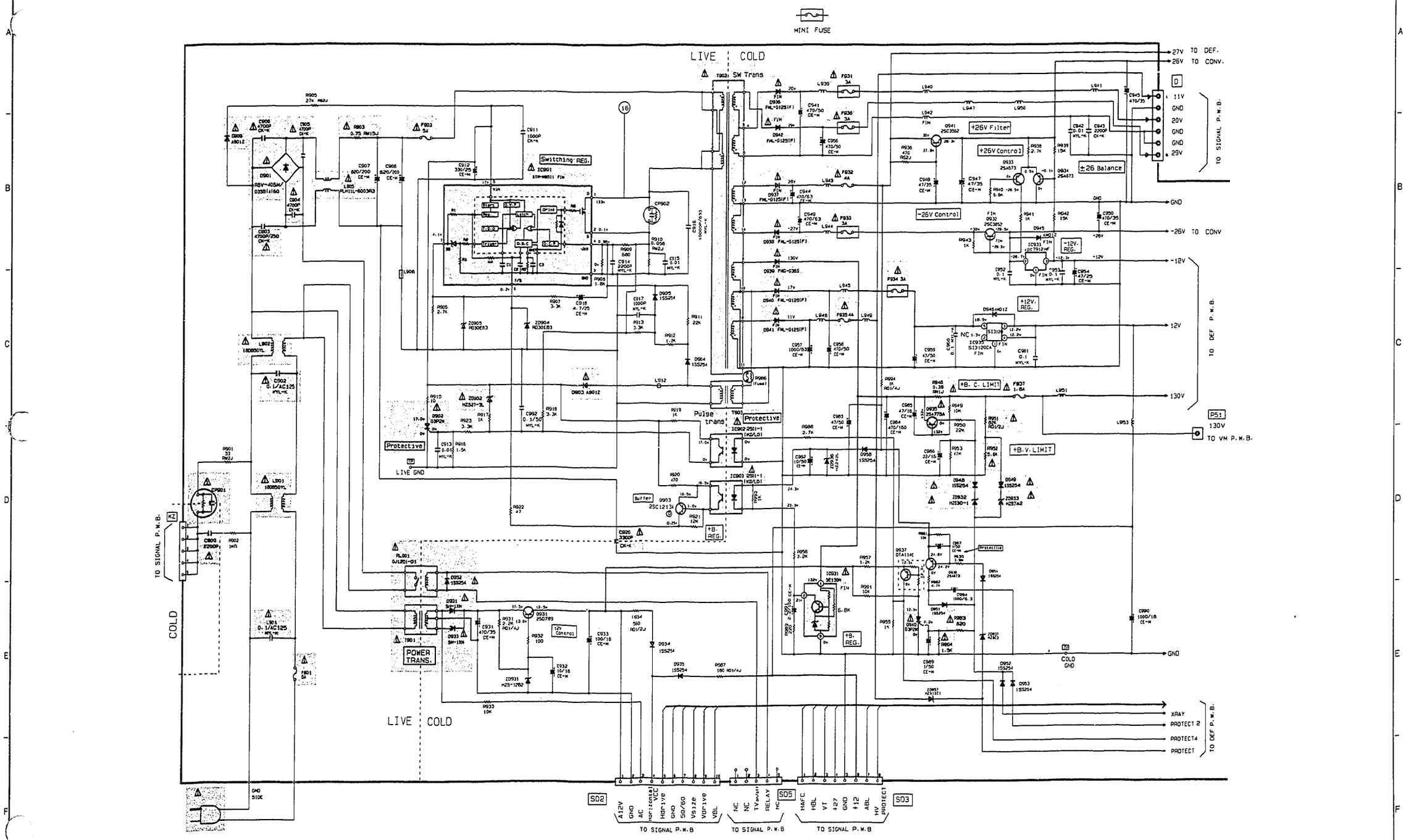
PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



AP43 POWER SUPPLY

• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

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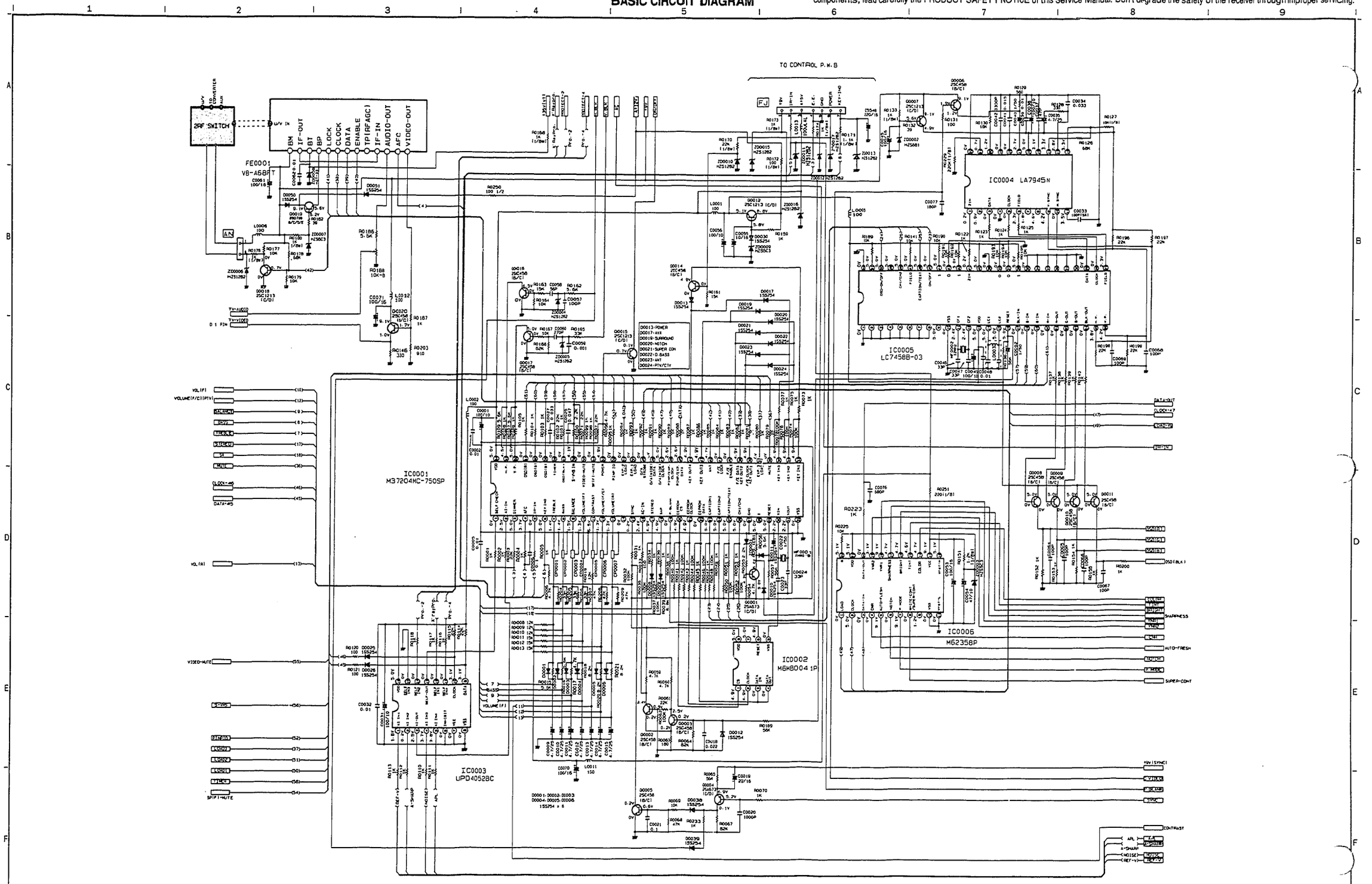

• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

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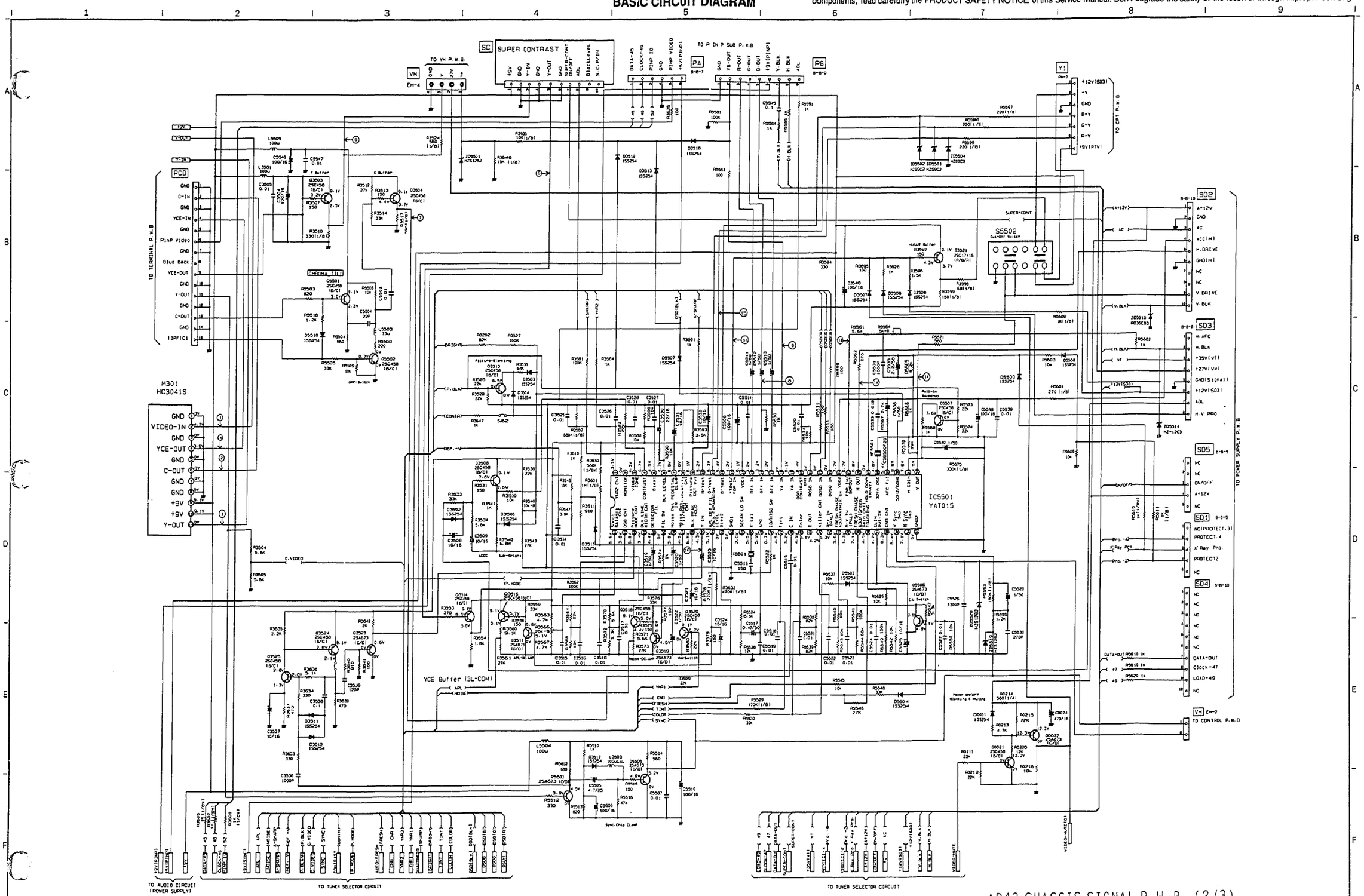

• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

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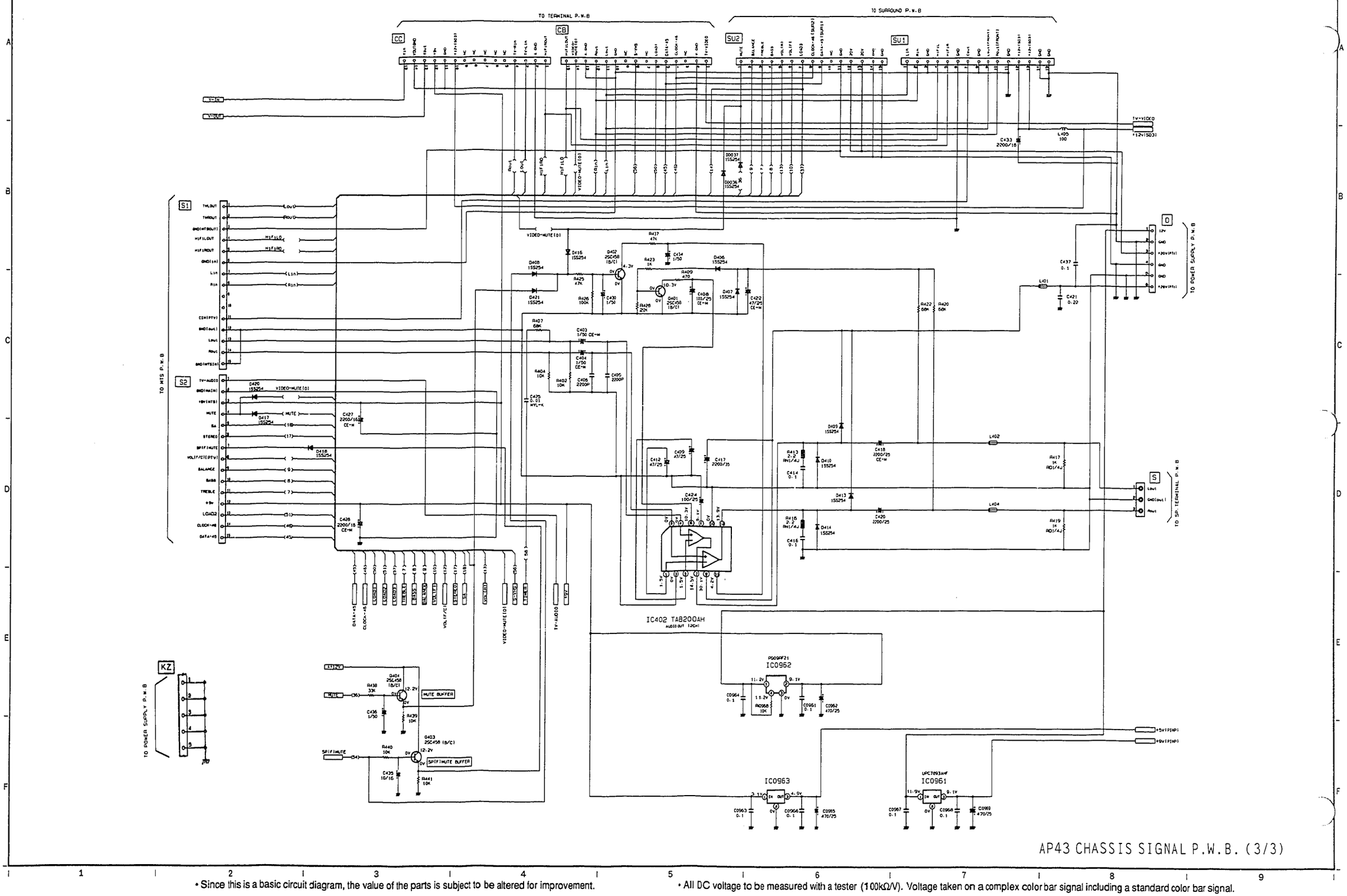

• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

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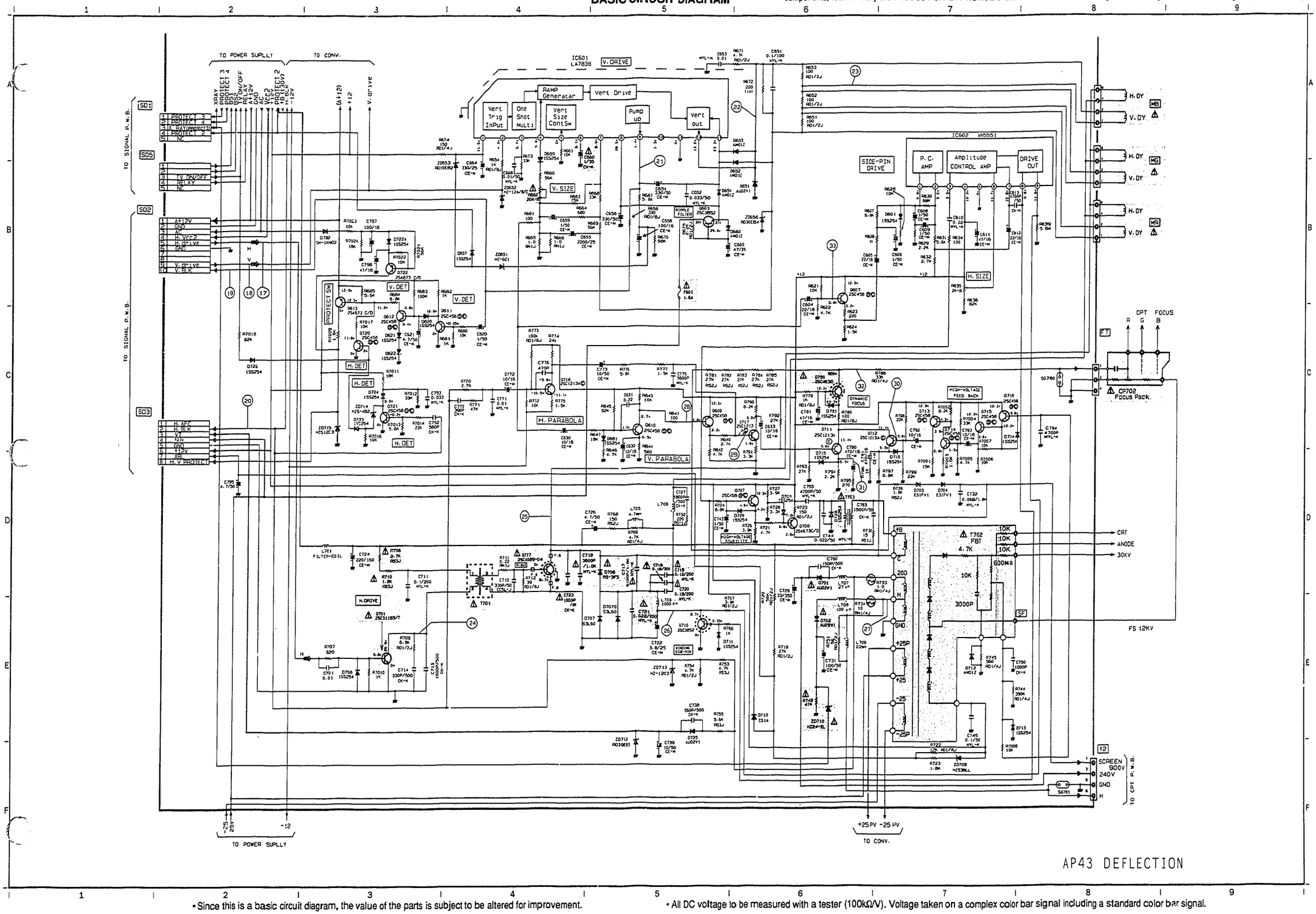

AP43 DEFLECTION

- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

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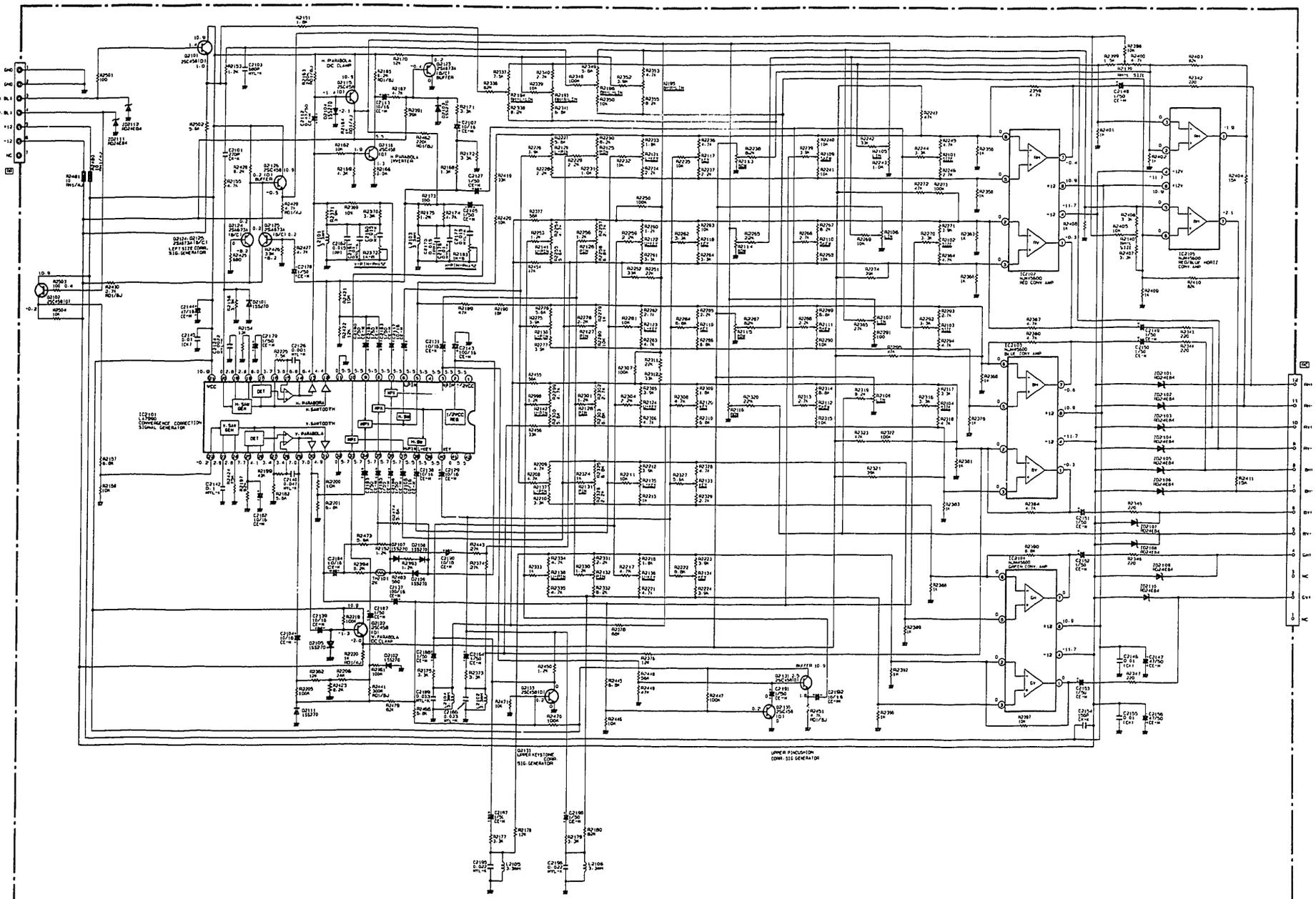
BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



AP43 CONVERGENCE CORRECTION P.W.B.

• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

http://www.ManualsCenter.com

BASIC CIRCUIT DIAGRAM

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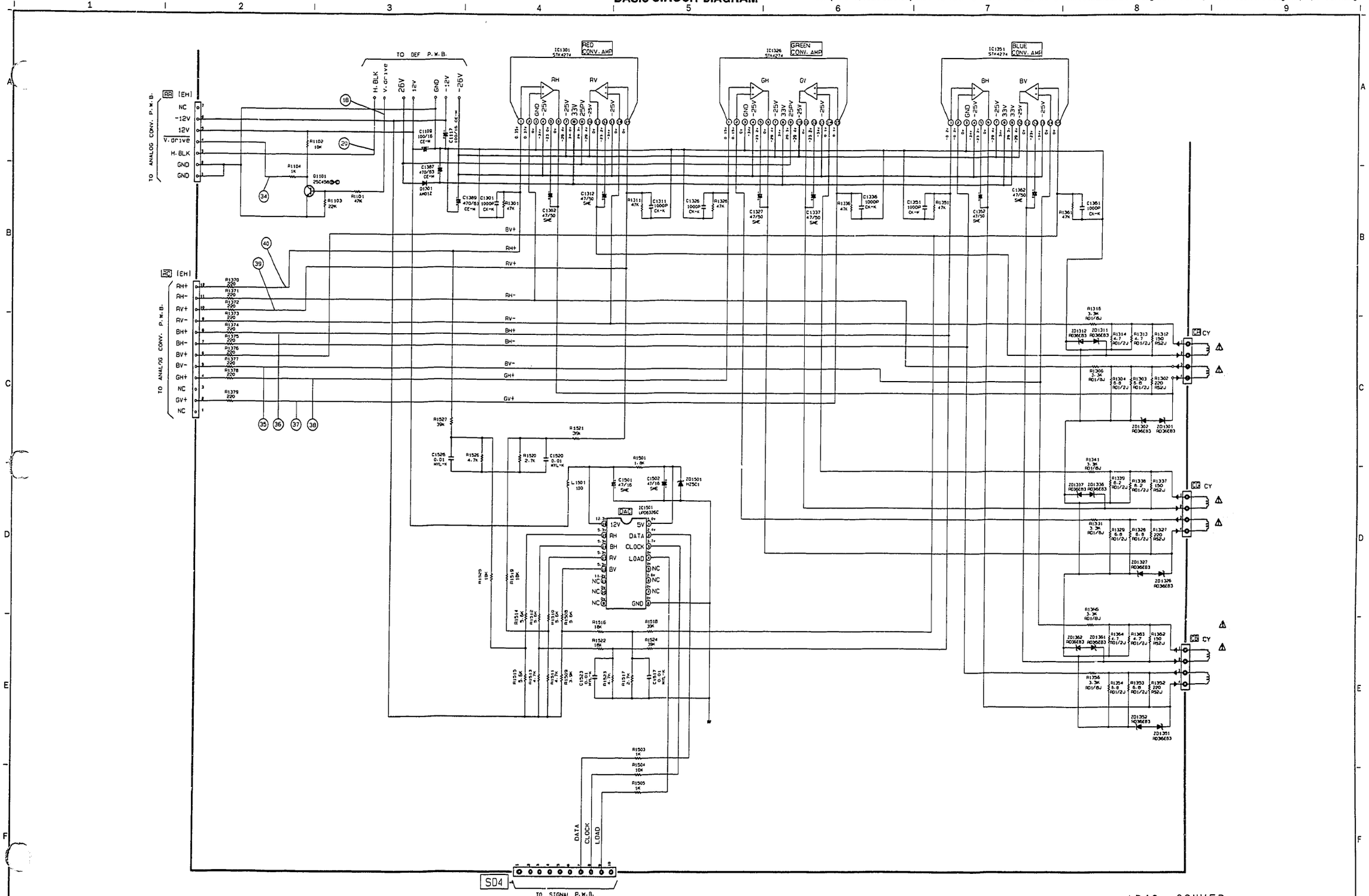

• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

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BASIC CIRCUIT DIAGRAM

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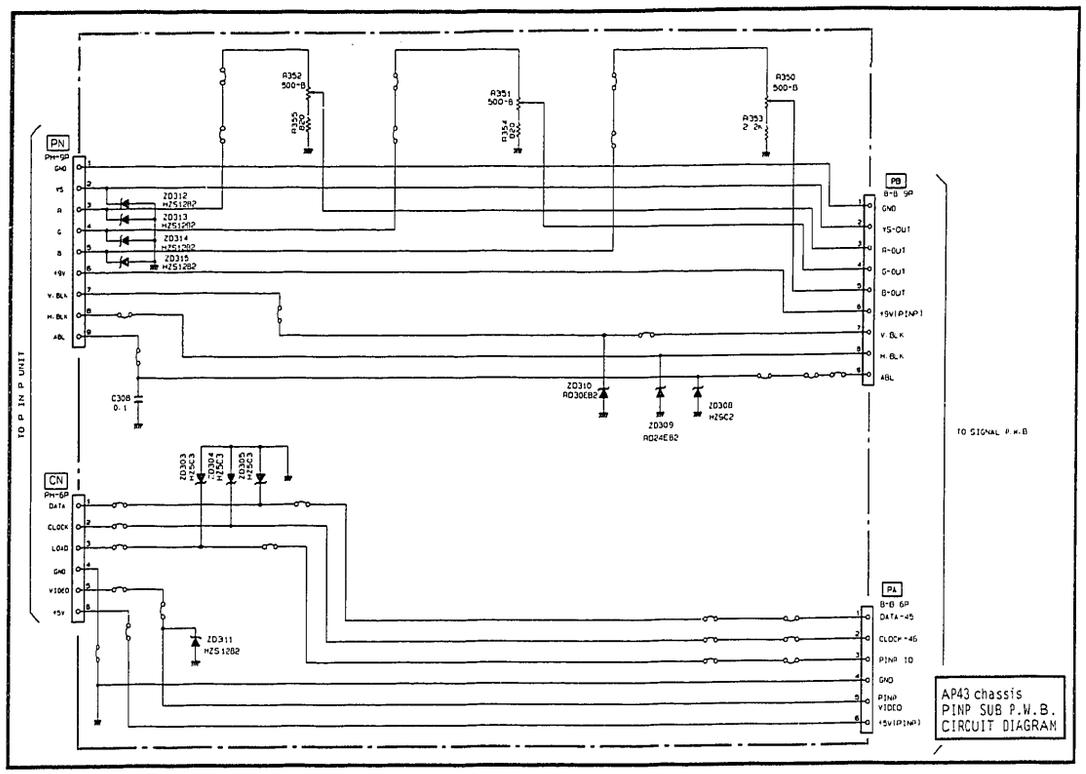

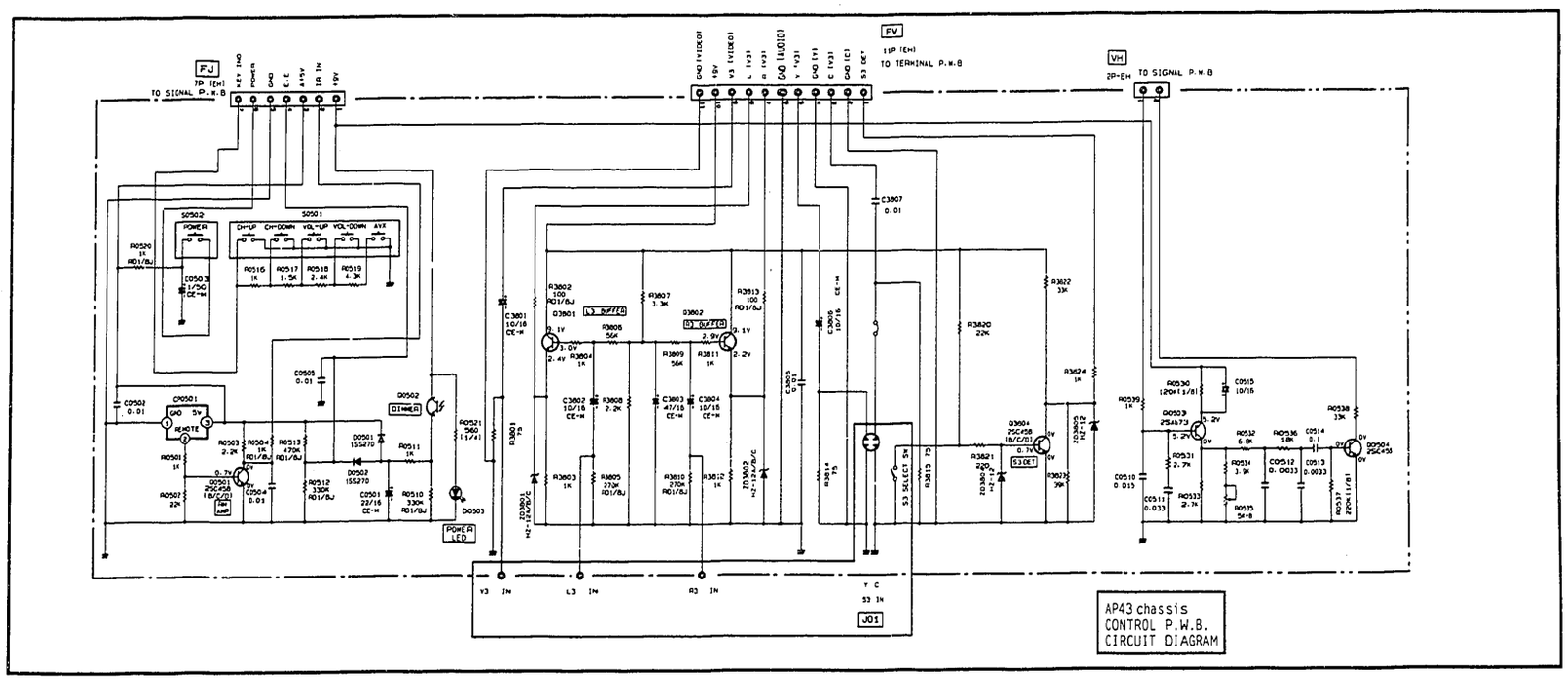

• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

http://www.ManualsCenter.com

BASIC CIRCUIT DIAGRAM

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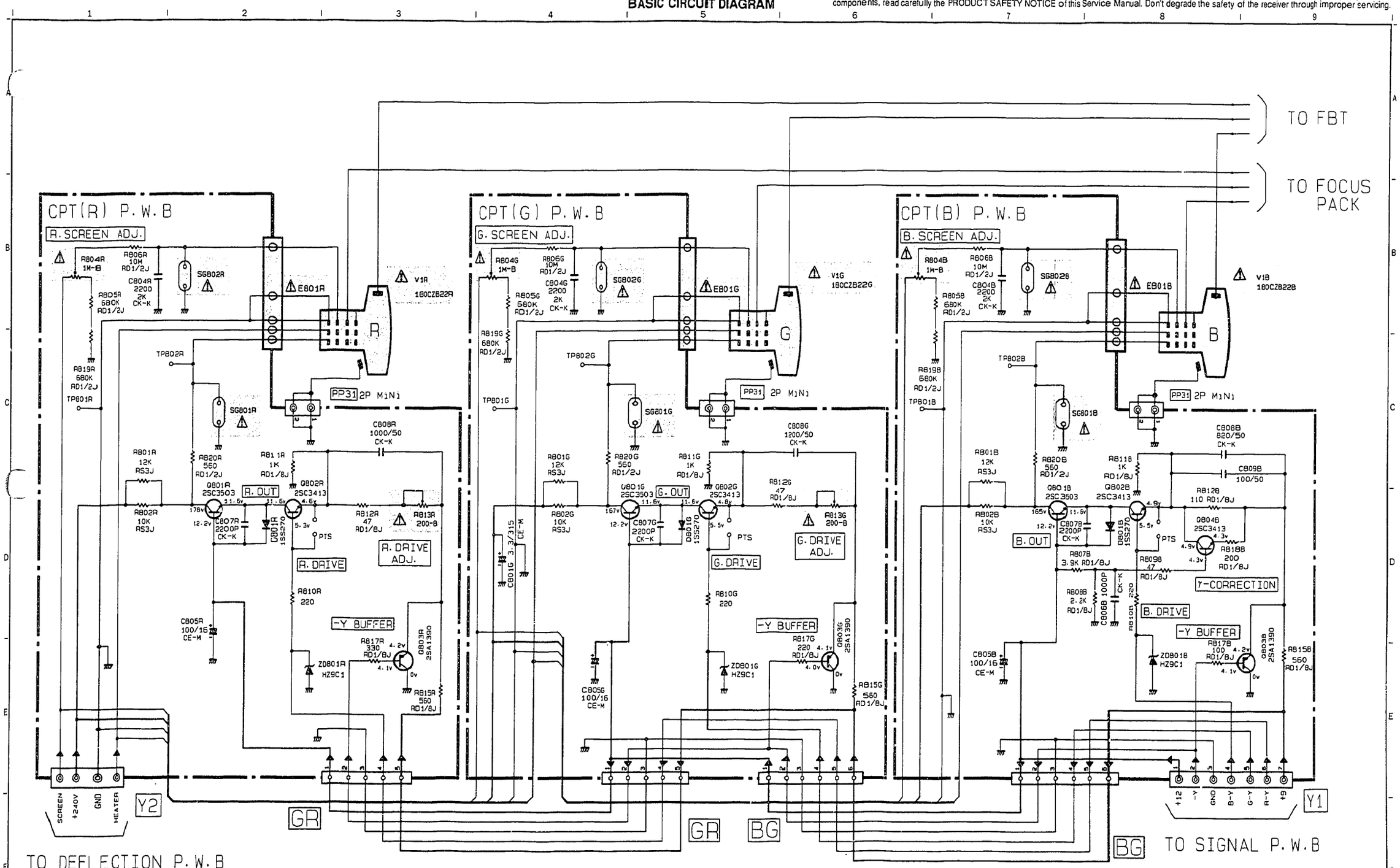


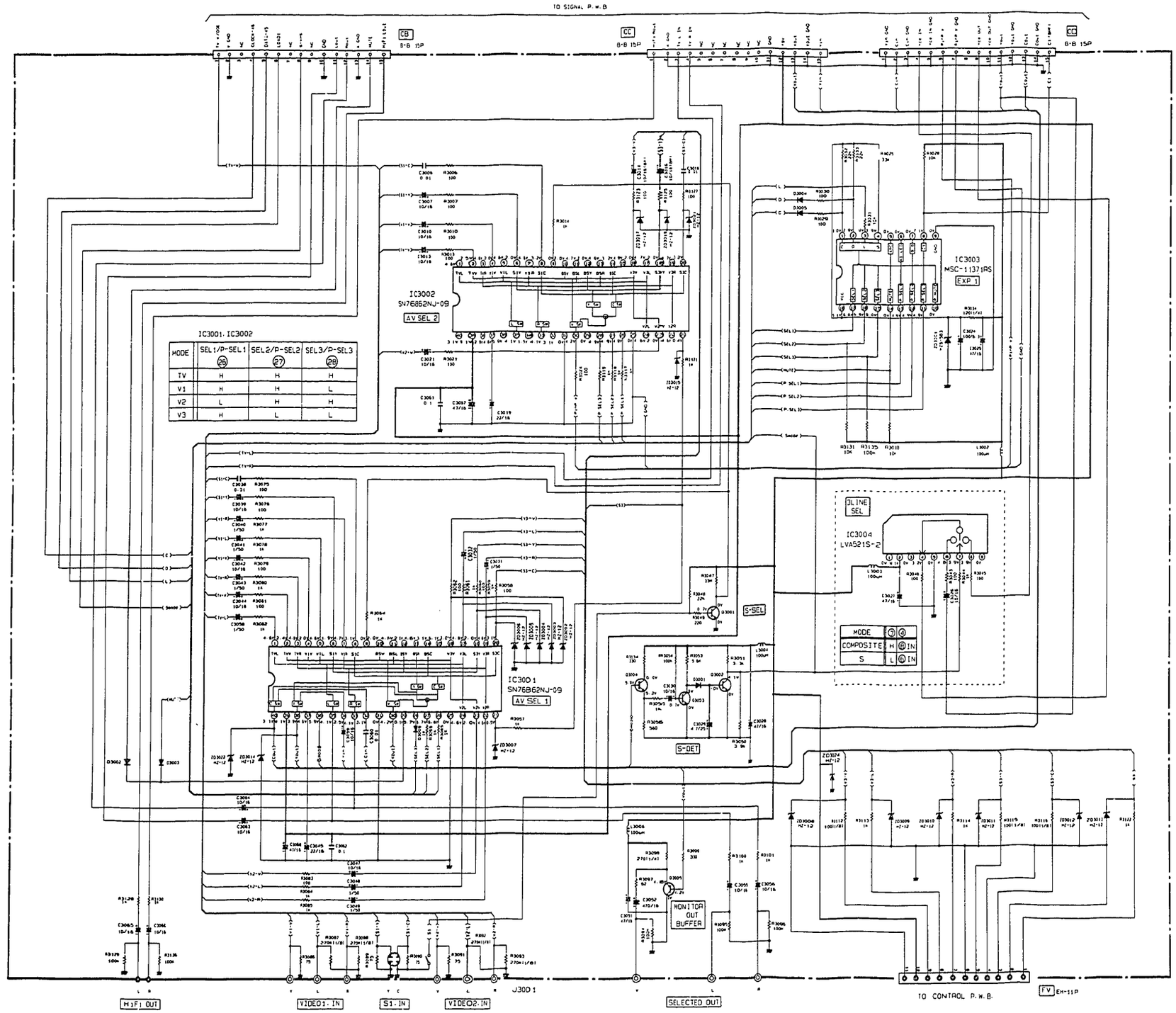
• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

http://www.ManualsCenter.com

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

http://www.ManualsCenter.com

BASIC CIRCUIT DIAGRAM

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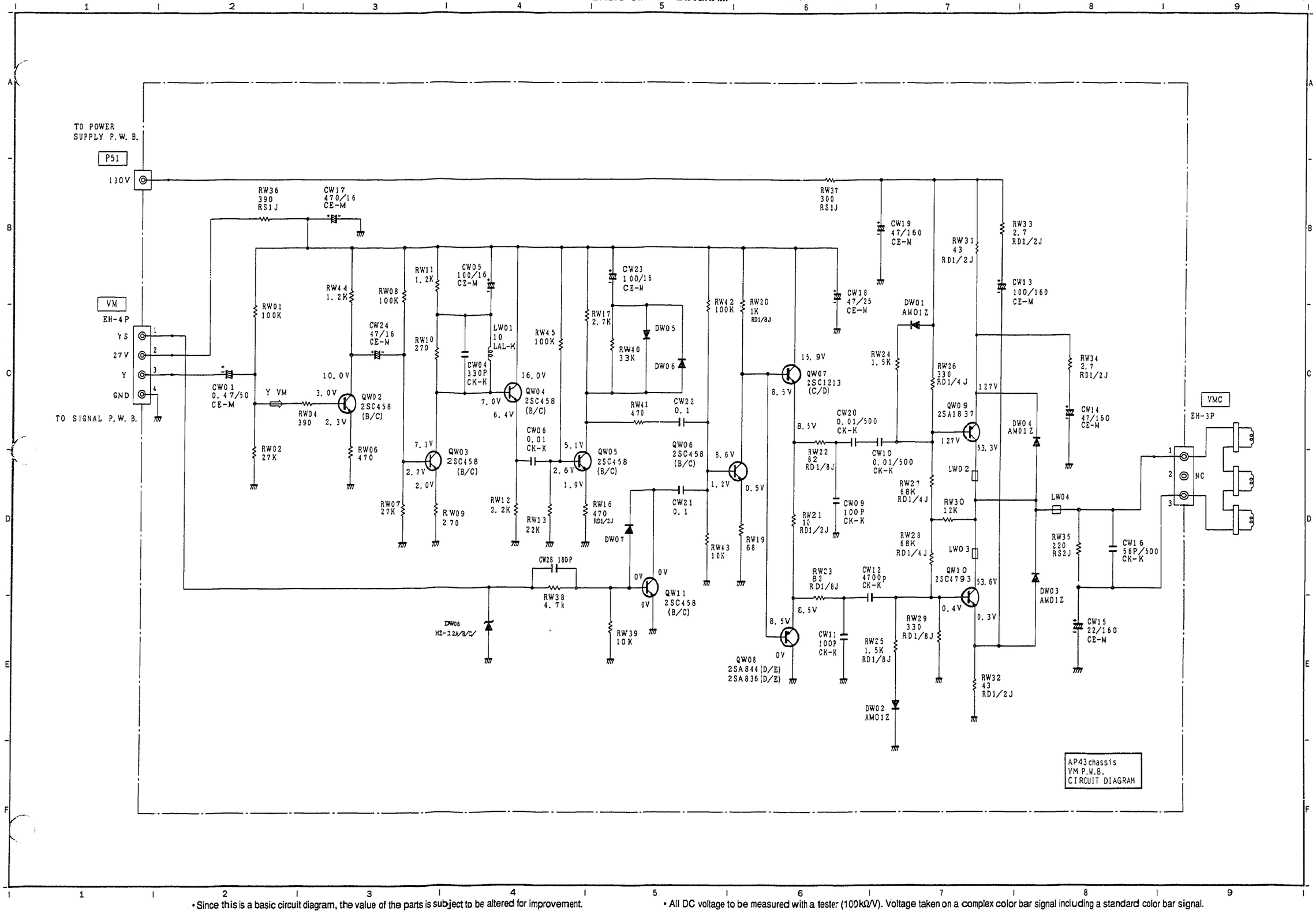

• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

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BASIC CIRCUIT DIAGRAM

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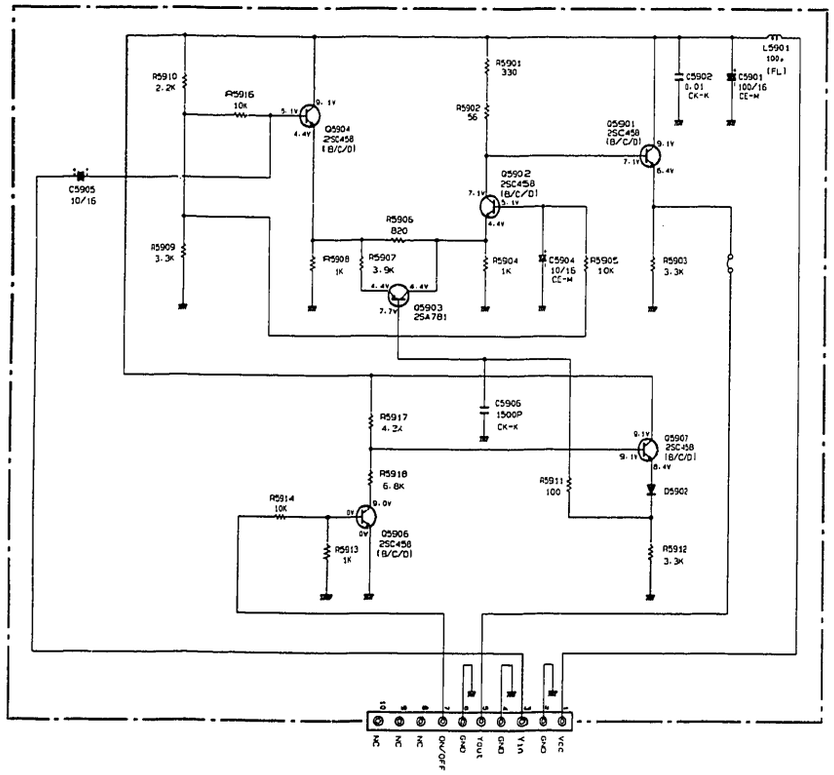
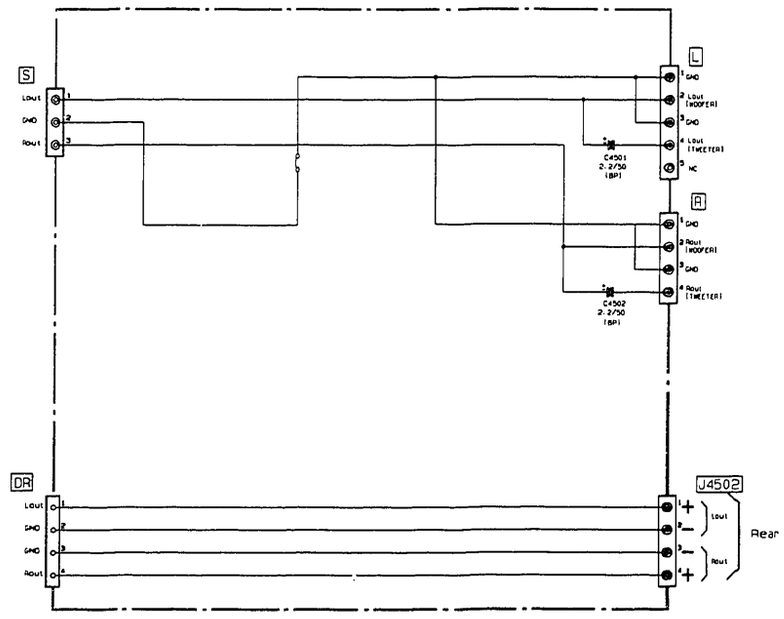


AP43 chassis
SUPER CONTRAST P.W.B.
CIRCUIT DIAGRAM



AP43 chassis
SP. TERMINAL P.W.B.
CIRCUIT DIAGRAM

• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

http://www.ManualsCenter.com

BASIC CIRCUIT DIAGRAM

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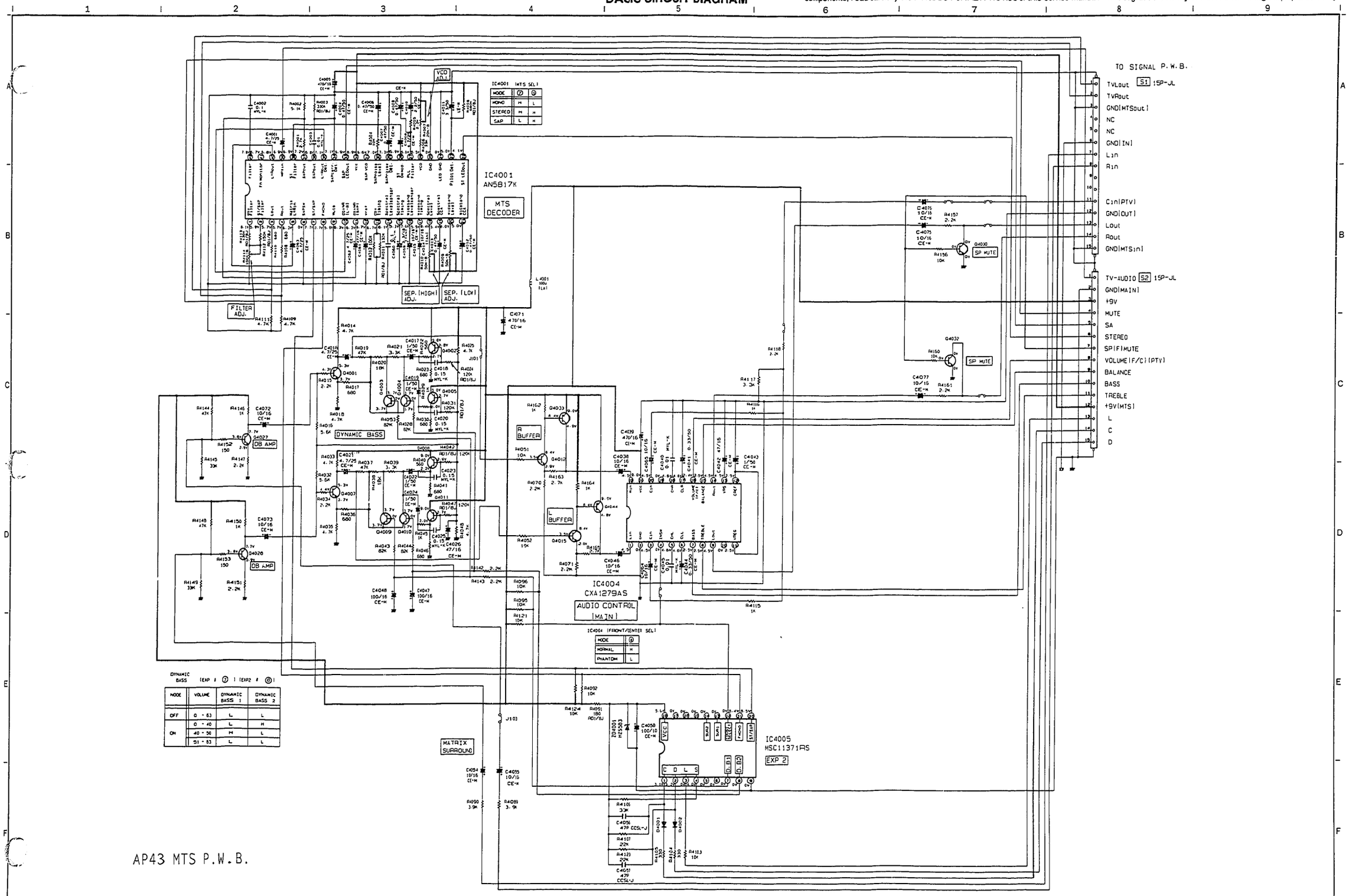

• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

http://www.ManualsCenter.com

BASIC CIRCUIT DIAGRAM

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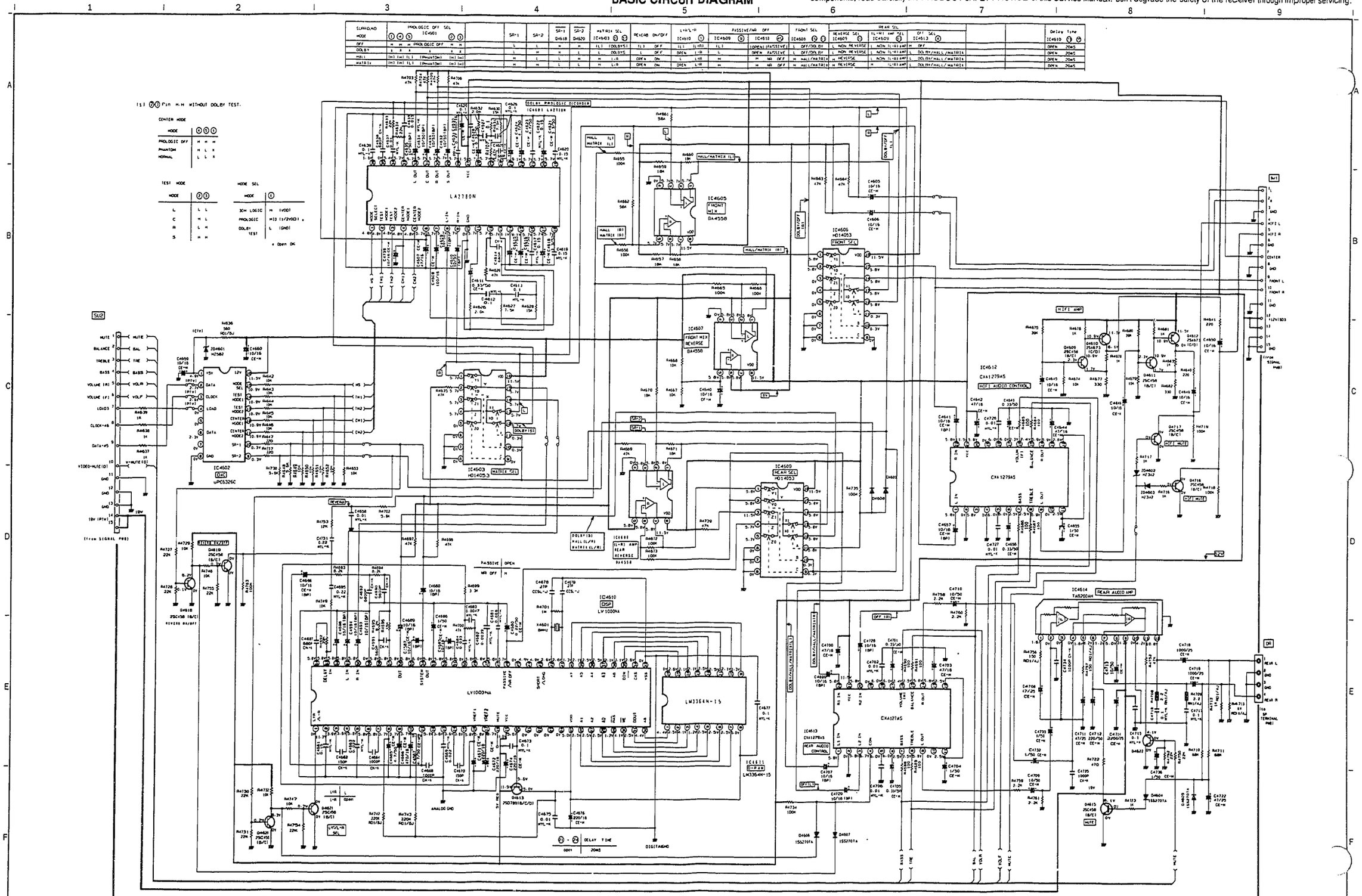


SURROUND MODE	PROLOGIC OFF SEL IC4601	SR-1	SR-2	SR-1 Q4618	SR-2 Q4620	MATRIX SEL IC4603	REVERB ON/OFF	L+R/L-R IC4610	PASSIVE/MIX OFF IC4609	PASSIVE/MIX OFF IC4613	FRONT SEL IC4608	REAR SEL IC4609	(L+R) AMP SEL IC4609	DLY SEL IC4613	Delay time IC4610
OFF	H H H PROLOGIC OFF H H	L	L	H	H	(L) (DOLBY)	(L) OFF	(L) (L+R)	(L)		L OFF/DOLBY	L NORMAL REVERSE	L NORMAL (L+R) AMP	H OFF	OPEN 20mS
DOLBY	X X X X X X	H	H	L	L	(R) DOLBY	L OFF	OPEN L-R	OPEN (PASSIVE)		L	L	L NORMAL (L+R) AMP	L DOLBY/HALL/MATRIX	OPEN 20mS
HALL	(H) (H) (L) (PHANTOM) (H) (H)	H	L	L	H	L	L OFF	H L-R	H		OPEN (PASSIVE)	L NORMAL REVERSE	L NORMAL (L+R) AMP	L DOLBY/HALL/MATRIX	OPEN 20mS
MATRIX	(H) (H) (L) (PHANTOM) (H) (H)	H	H	L	L	H	L ON	H L-R	H		H HALL/MATRIX	H REVERSE	H (L+R) AMP	L DOLBY/HALL/MATRIX	OPEN 20mS
							OPEN ON	OPEN L-R	H		H HALL/MATRIX	H REVERSE	H (L+R) AMP	L DOLBY/HALL/MATRIX	OPEN 20mS

1st (Y)(X) Pin H-H WITHOUT DOLBY TEST.

CENTER MODE

MODE	③	②	①
PROLOGIC OFF	H	H	H
PHANTOM	H	L	X
NORMAL	L	L	X

TEST MODE

MODE	③	②
L	L	L
C	H	L
R	L	H
S	H	H

MODE SEL

MODE	①
3CH LOGIC	H (+VCC)
PROLOGIC	MID (1/2VCC) *
DOLBY	L (GND)
TEST	

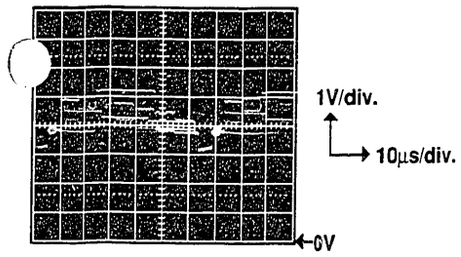
* Open DC

- Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.
- All DC voltage to be measured with a tester (10DkΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

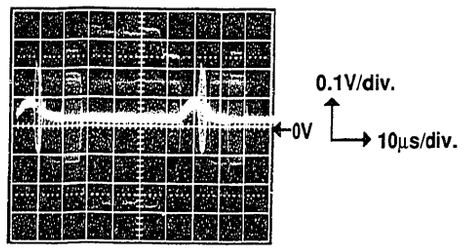
http://www.ManualsCenter.com

WAVEFORMS AT EACH SECTION

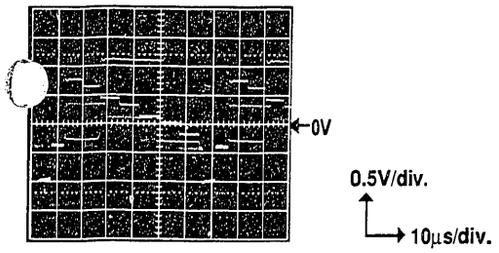
① M301 pin 2
(Video in)



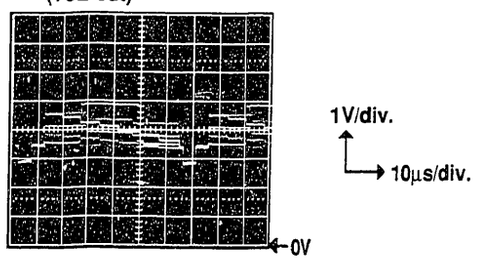
② M301 pin 6
(C-out)



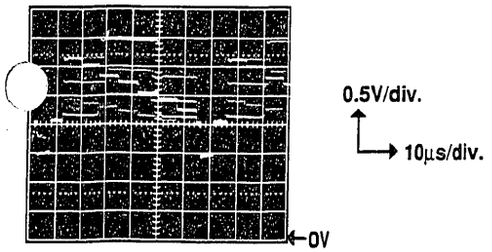
③ M301 pin 11
(Y-out)



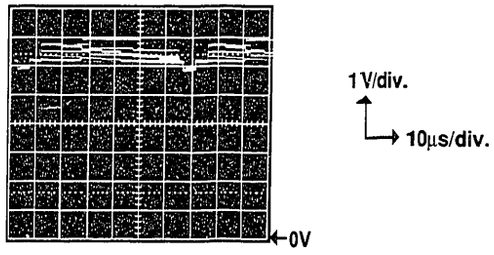
④ M301 pin 4
(YCE-out)



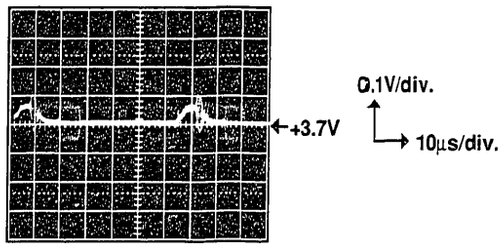
⑤ Q3503 Emitter
(Y-buffer)



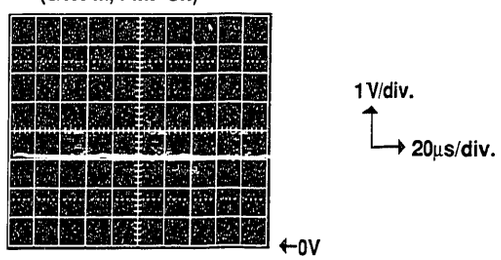
⑥ SC-connector pin 5
(Super Contrast Y-out)



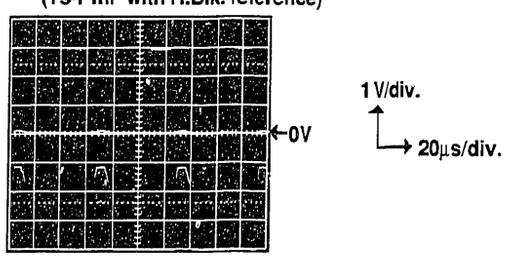
⑦ Q3504 emitter
(C-buffer)



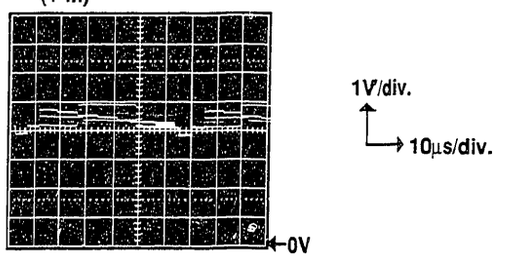
⑧ IC5501 pin 16
(GTX in, PinP on)



⑨ IC5501 pin 18
(Ys-PinP with H.Blk. reference)

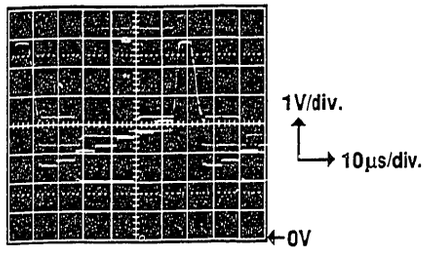


⑩ IC5501 pin 55
(Y-in)

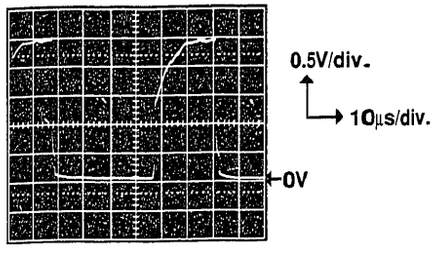


WAVEFORMS AT EACH SECTION

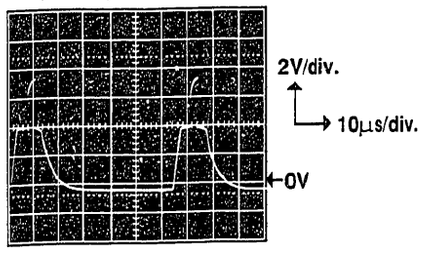
⑪ IC5501 pin 13
(-Y out)



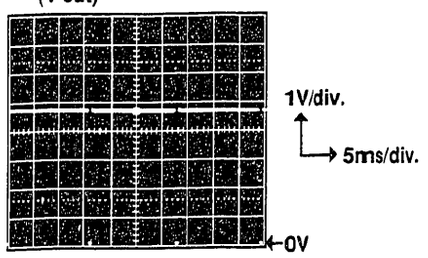
⑫ IC5501 pin 26
(H-out)



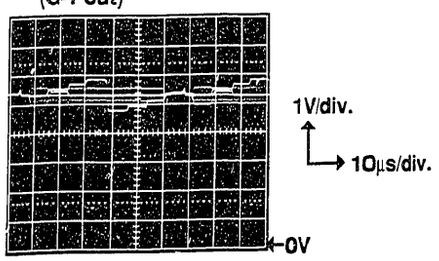
⑬ IC5501 pin 25
(FB Pin)



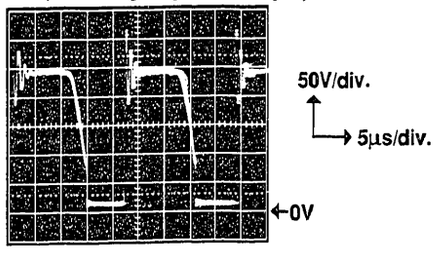
⑭ IC5501 pin 32
(V out)



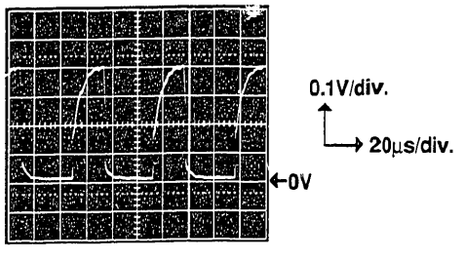
⑮ IC5501 pin 11
(G-Y out)



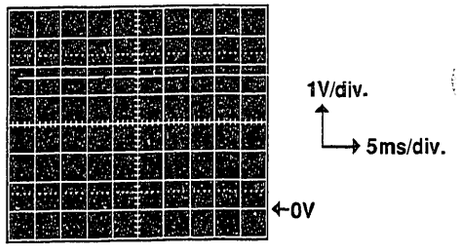
⑯ IC901 pin 1
(Switching Regulator Output)



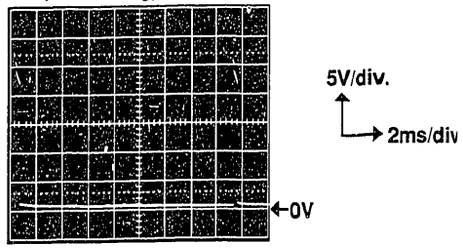
⑰ SD2 connector pin 5
(H. Drive)



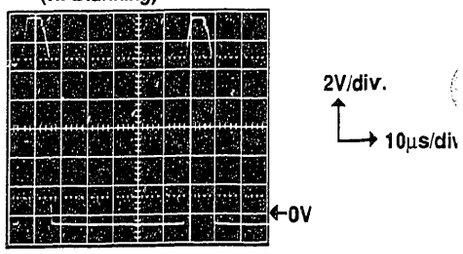
⑱ SD2 connector pin 9
(V. Drive)



⑲ SD2 connector pin 10
(V. Blanking)

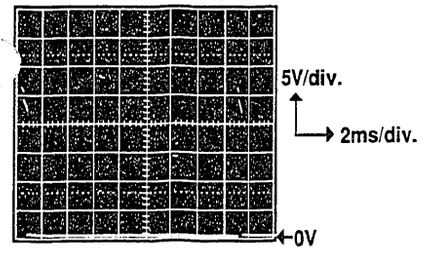


⑳ SD3 connector pin 2
(H. Blanking)

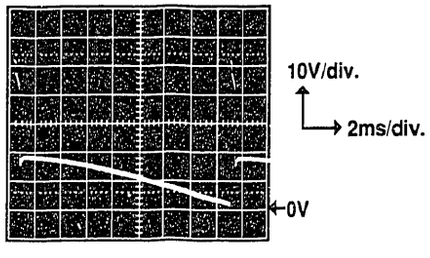


WAVEFORMS AT EACH SECTION

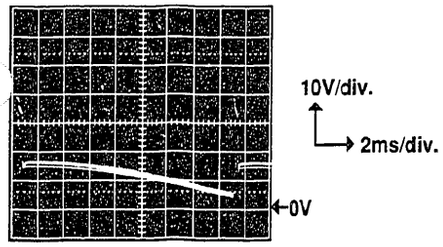
㉑ IC601 pin 9
(V. pump-up)



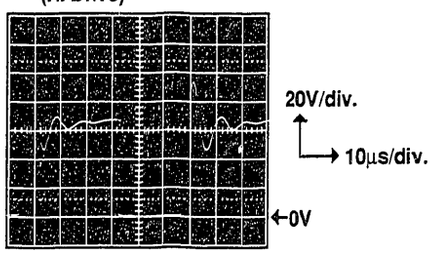
㉒ IC601 pin 12
(V.-out)



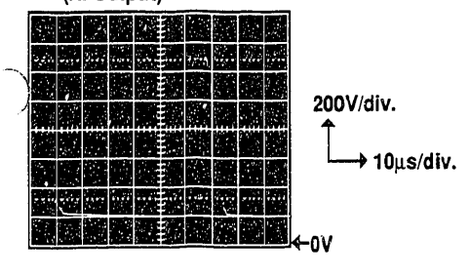
㉓ MB-connector pin 1
(V.DY-Blue)



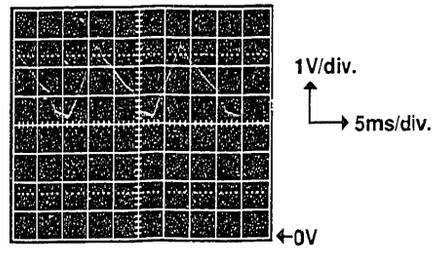
㉔ Q701 Collector
(H. Drive)



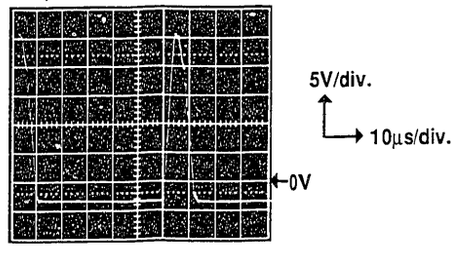
㉕ Q777 Collector
(H. Output)



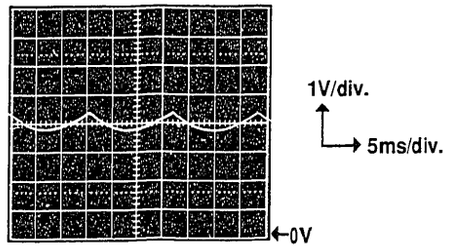
㉖ Q710 Collector



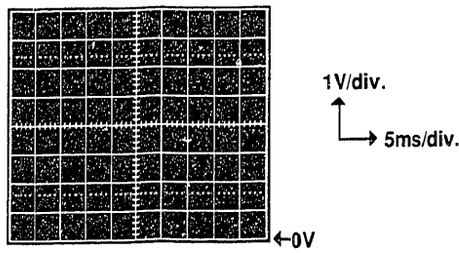
㉗ FBT pin H
(CPT Heater)



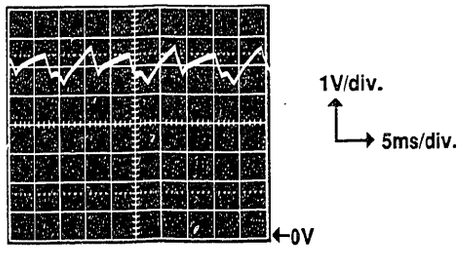
㉘ Q609 Base



㉙ Q717 Base



㉚ Q712 Base



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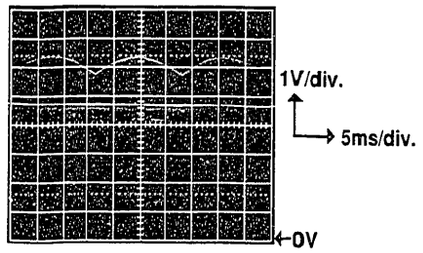
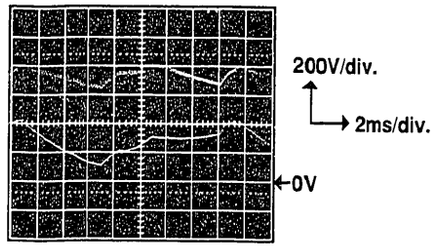
WAVEFORMS AT EACH SECTION

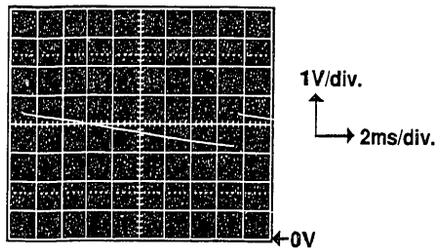
(31) Q711 Emitter



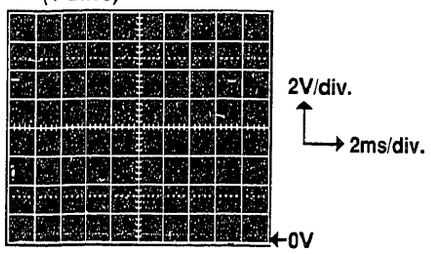
(32) Q780 Collector (Dynamic Focus)



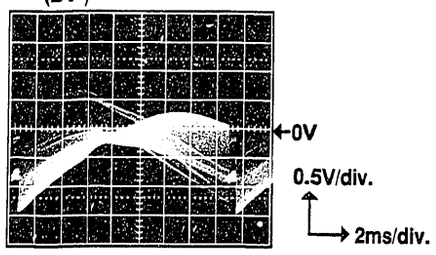
(33) Q607 Base



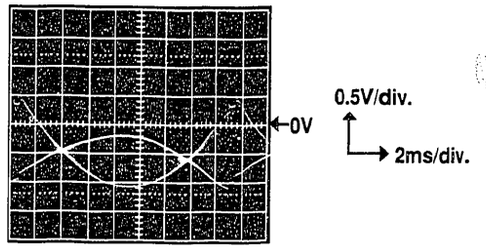
(34) RR connector pin 4 (V Drive)



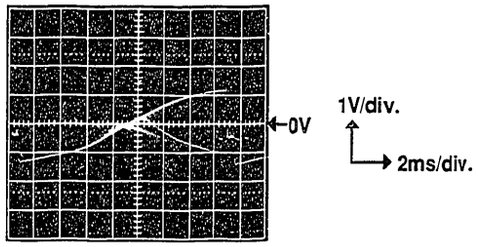
(35) IC1351 pin 14 (BV-)



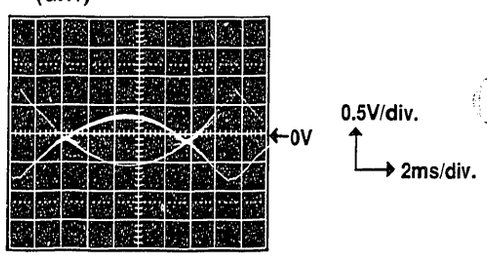
(36) IC1351 pin 1 (BH+)



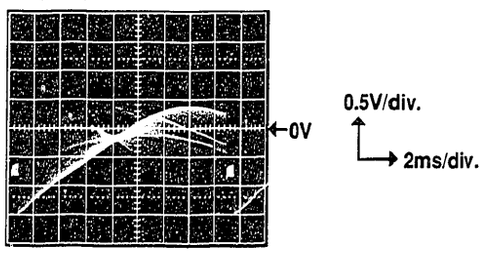
(37) IC1326 pin 15 (GV+)



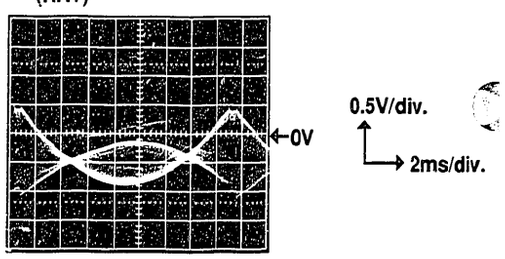
(38) IC1326 pin 1 (GH+)



(39) IC1301 pin 15 (RV+)

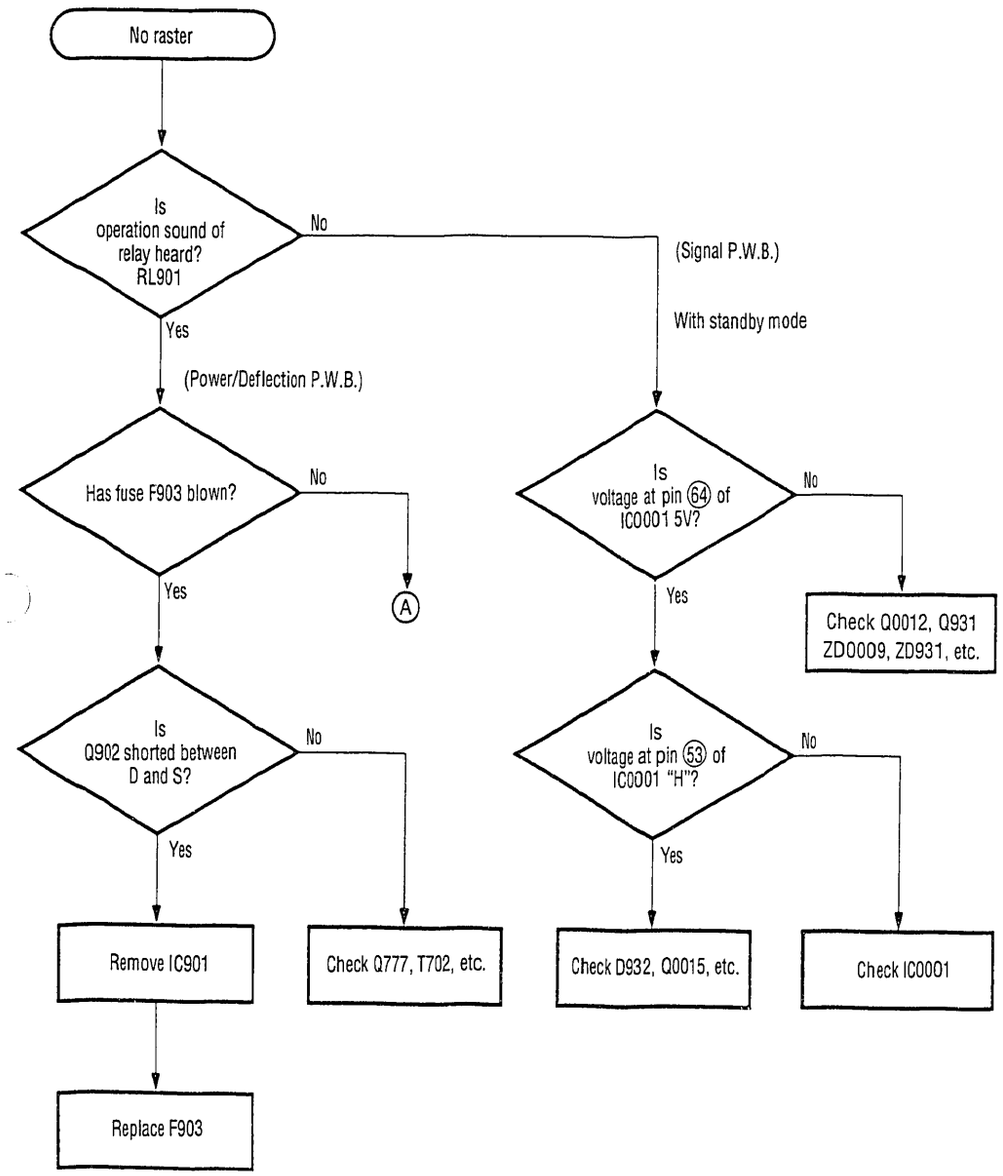


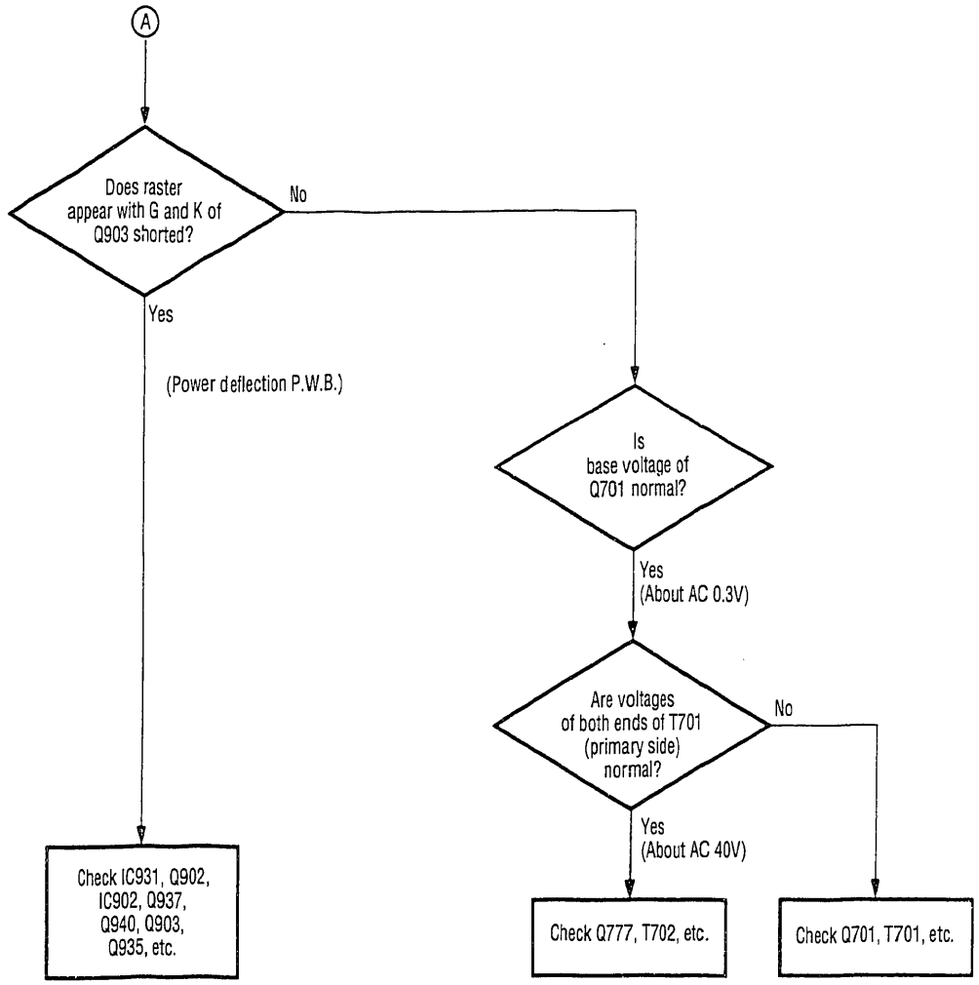
(40) IC1301 pin 1 (RH+)



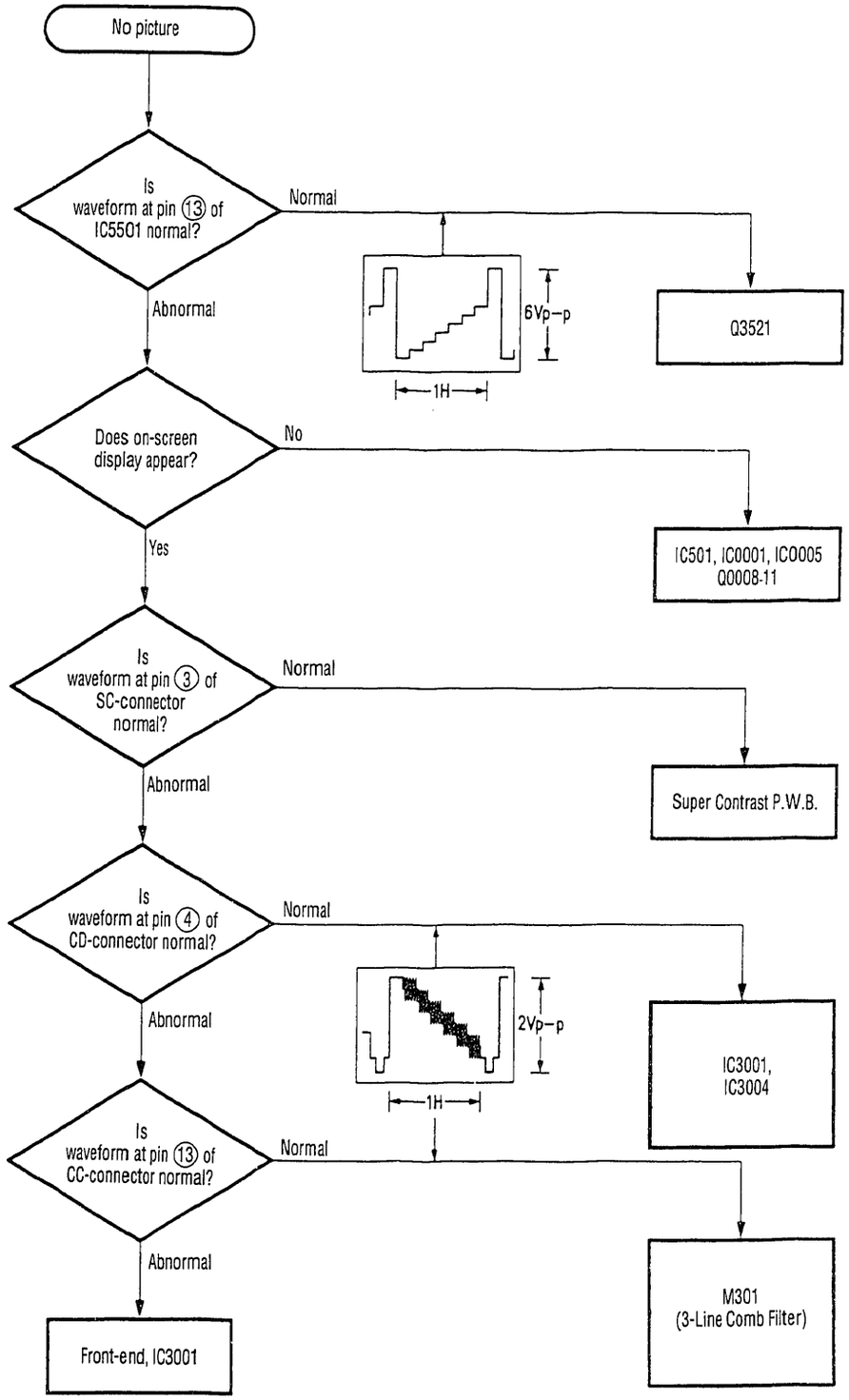
TROUBLESHOOTING

1. No raster

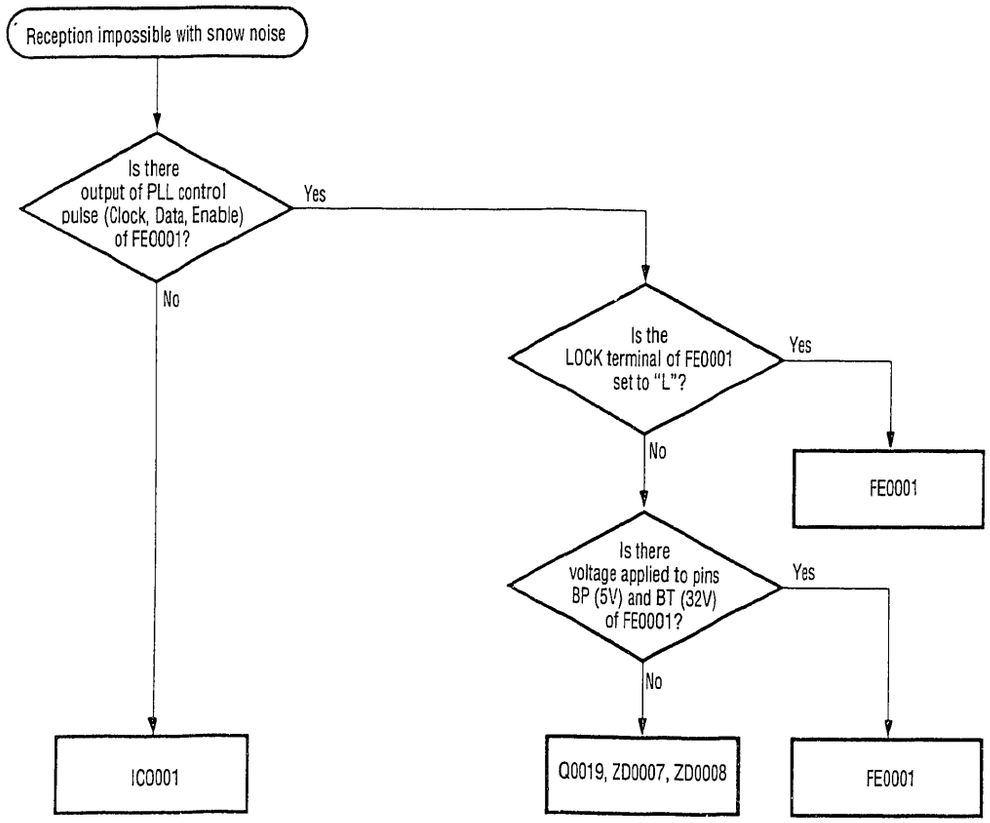



A
Does raster appear with G and K of Q903 shorted?
No
Yes
(Power deflection P.W.B.)
Check IC931, Q902, IC902, Q937, Q940, Q903, Q935, etc.
Is base voltage of Q701 normal?
Yes (About AC 0.3V)
Are voltages of both ends of T701 (primary side) normal?
No
Yes (About AC 40V)
Check Q777, T702, etc.
Check Q701, T701, etc.

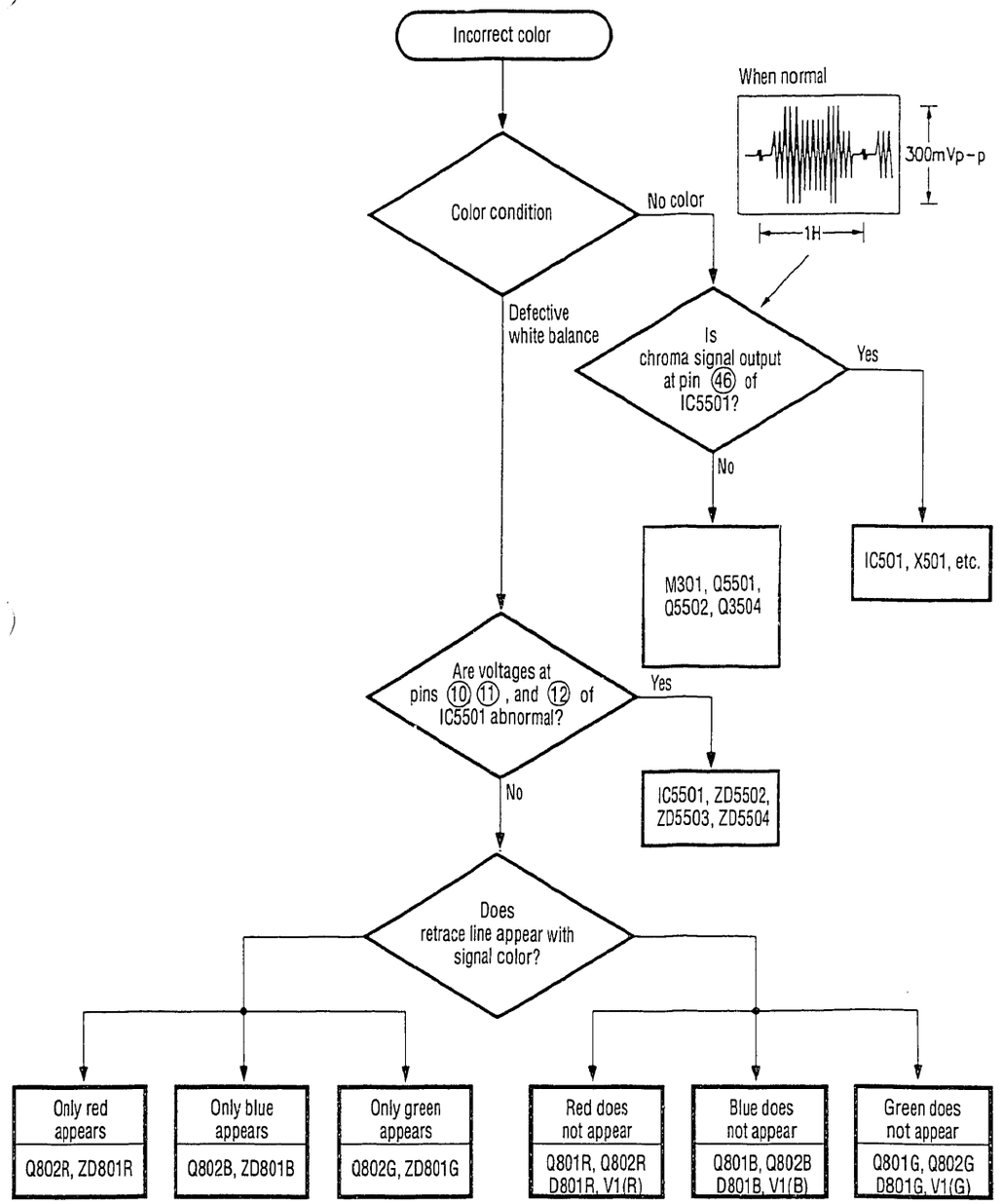
2. No picture


No picture
Is waveform at pin (13) of IC5501 normal?
Normal
Abnormal
6Vp–p
1H
Q3521
Does on-screen display appear?
No
Yes
IC501, IC0001, IC0005 Q0008-11
Is waveform at pin (3) of SC-connector normal?
Normal
Abnormal
Super Contrast P.W.B.
Is waveform at pin (4) of CD-connector normal?
Normal
Abnormal
2Vp–p
1H
IC3001, IC3004
Is waveform at pin (13) of CC-connector normal?
Normal
Abnormal
M301 (3-Line Comb Filter)
Front-end, IC3001

3. Reception impossible with snow noise



4. Incorrect color



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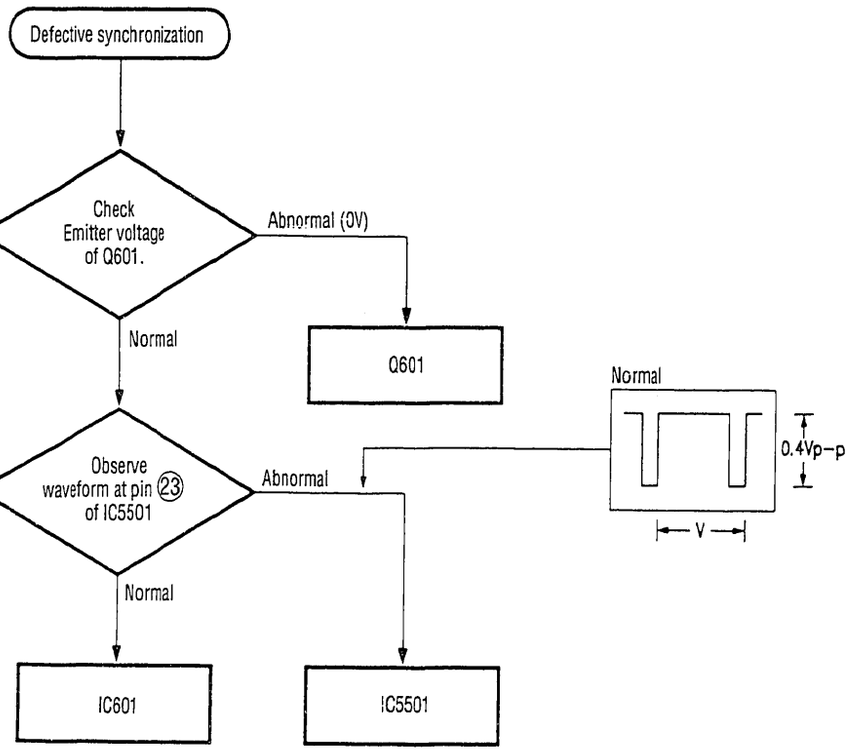
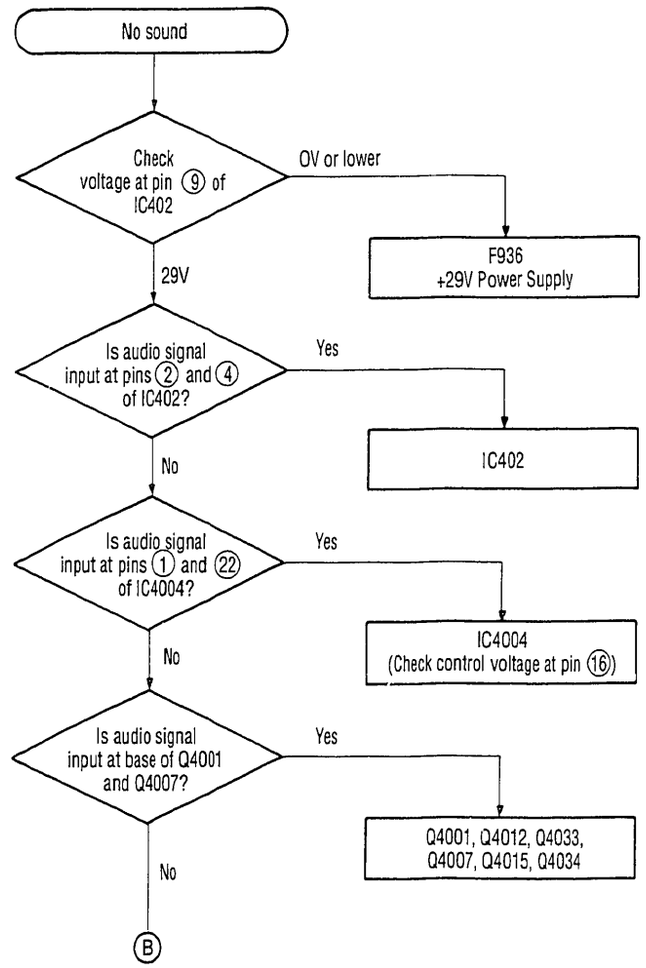
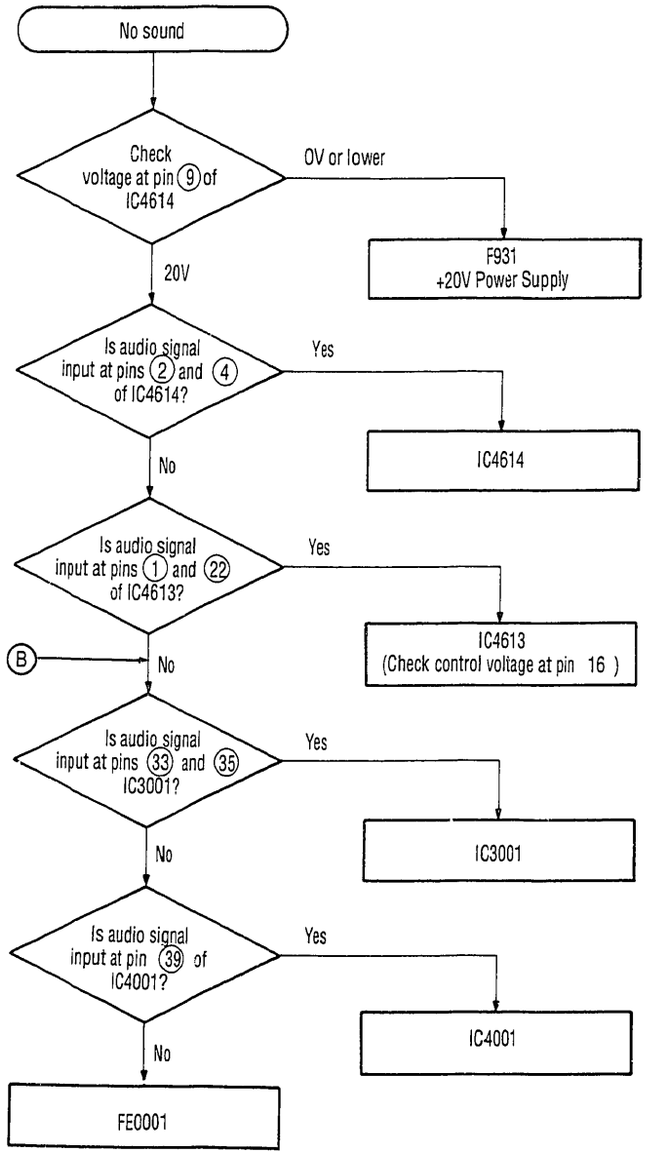
5. Defective synchronization



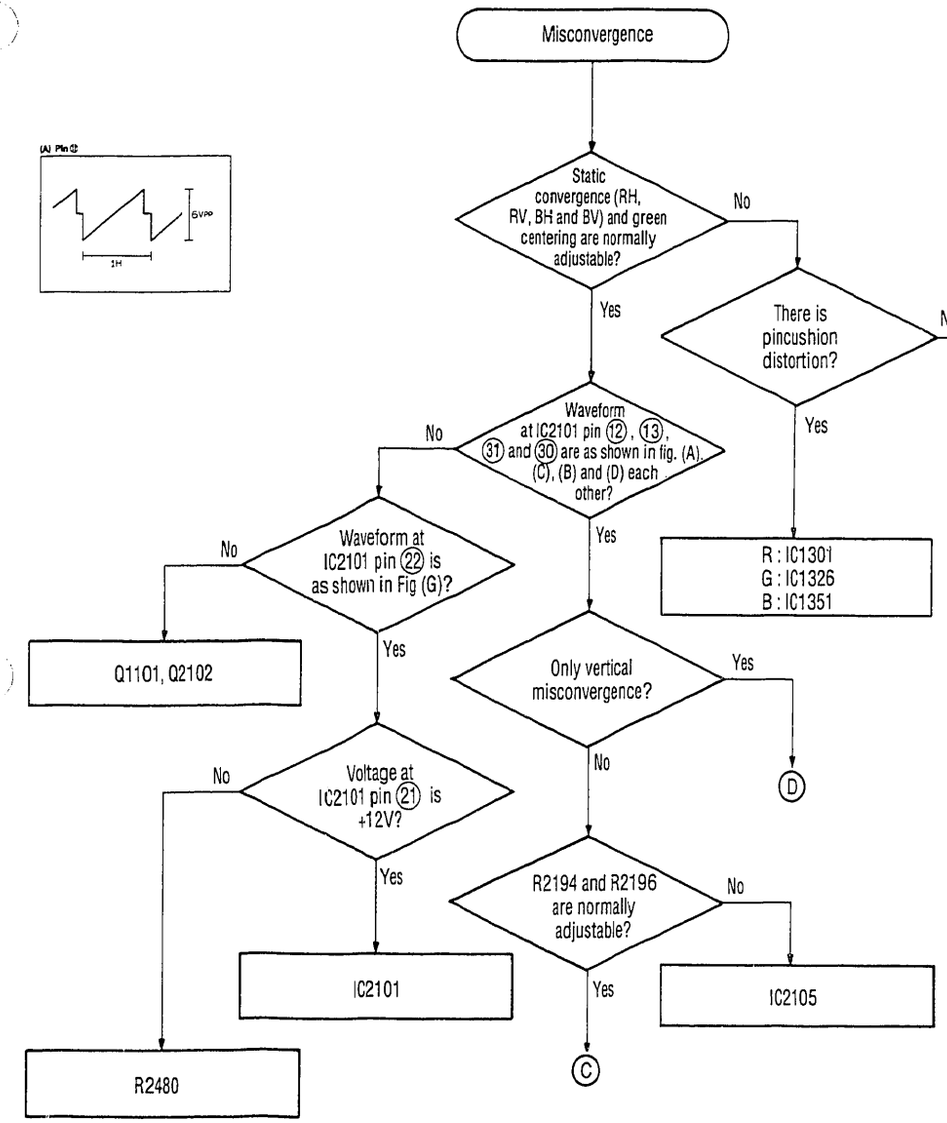
6-1. No sound (when Surround OFF)
(1) Front audio circuit

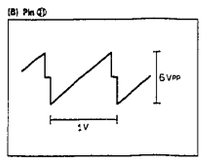


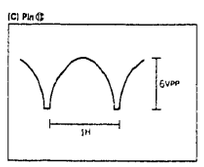
(2) Rear audio circuit

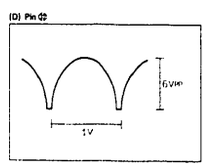


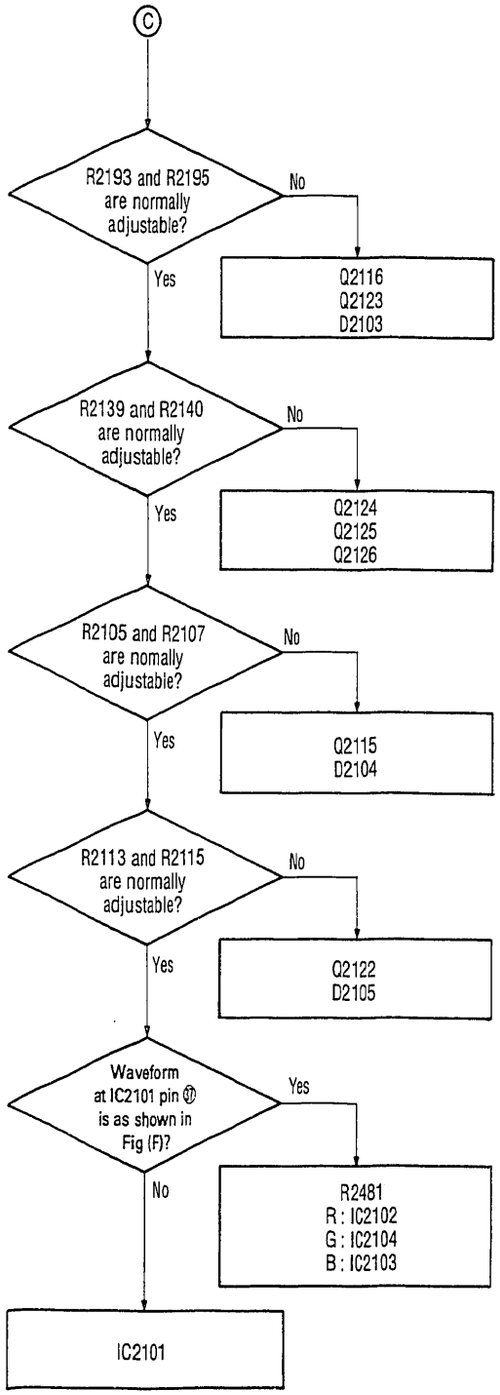
7. Misconvergence

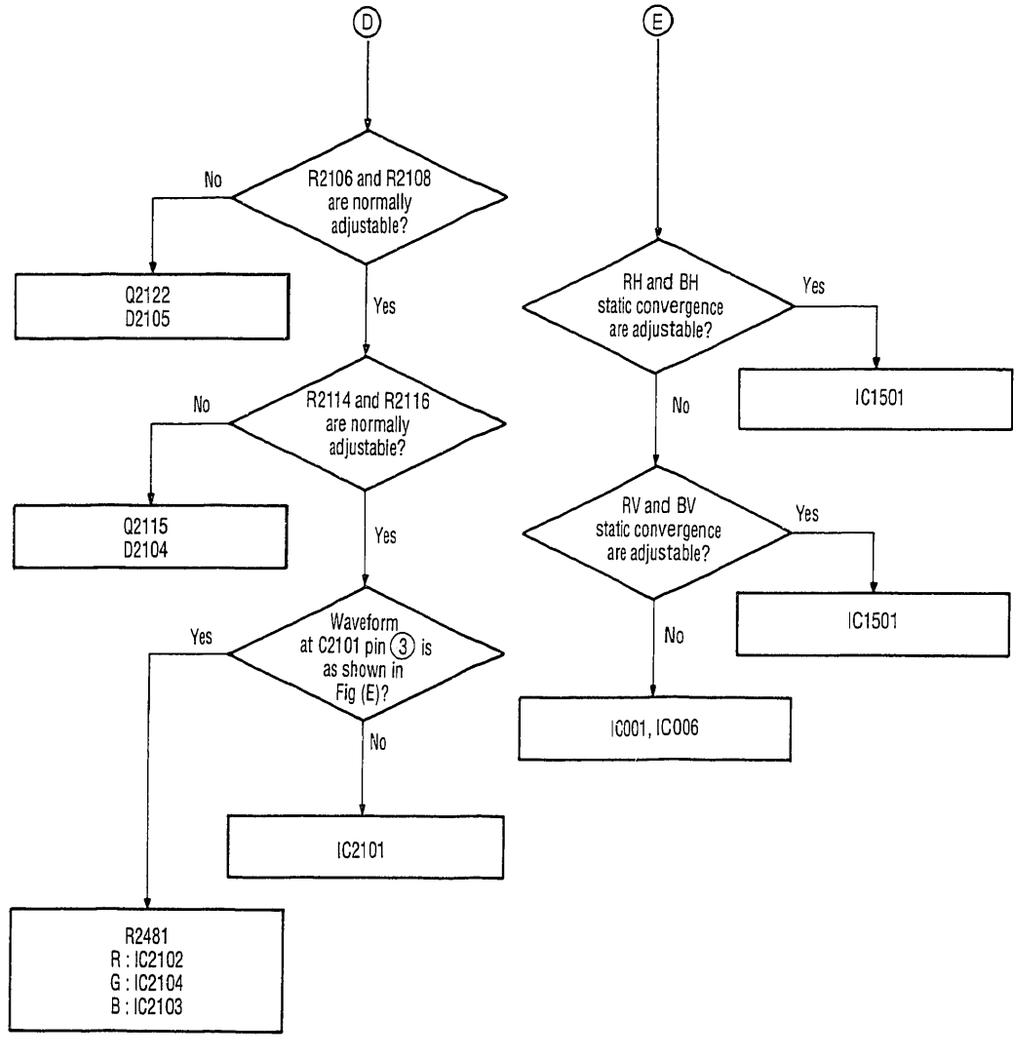


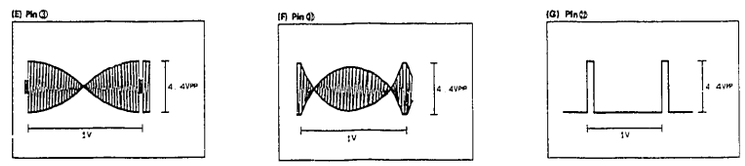




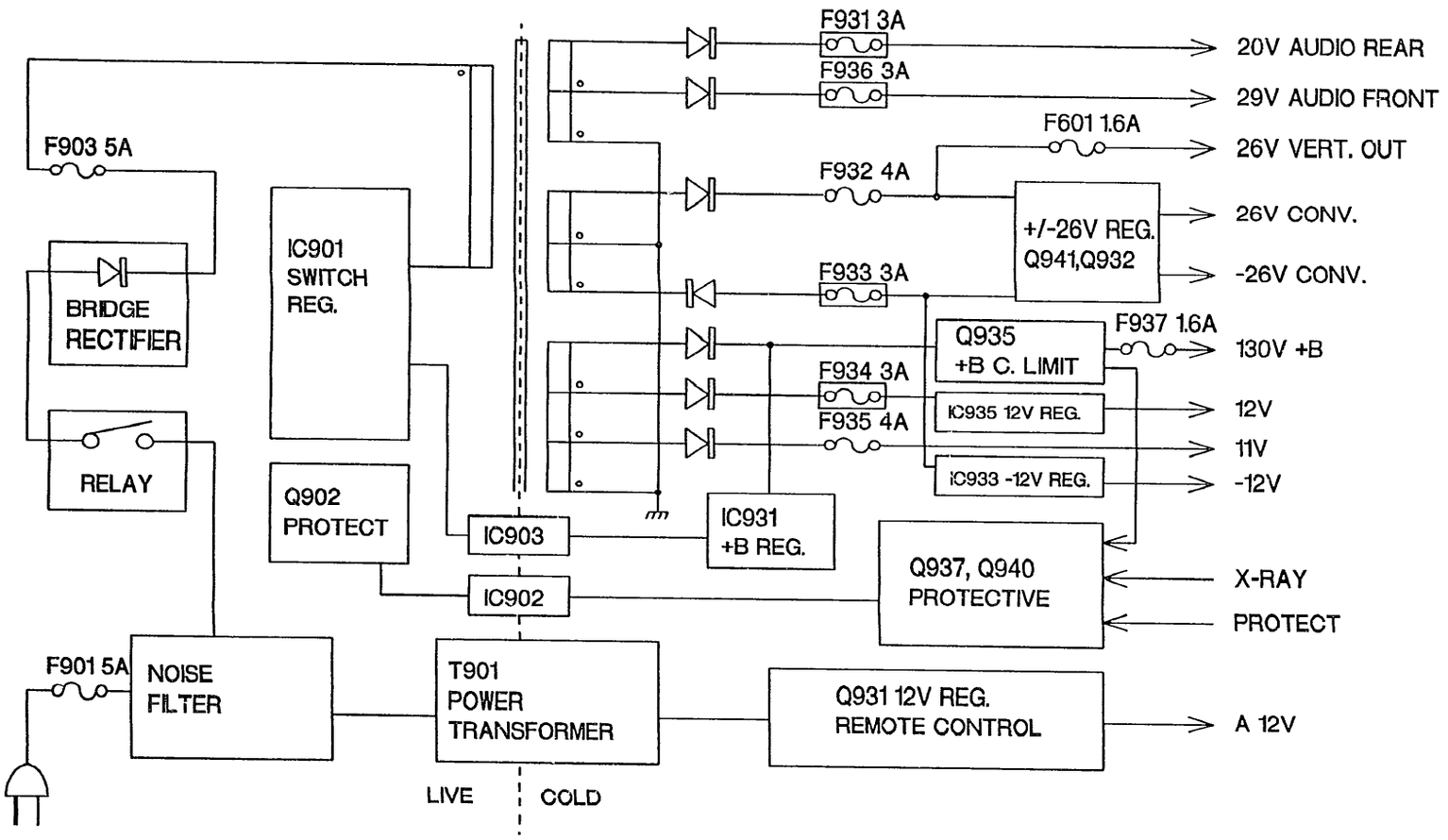



C
R2193 and R2195 are normally adjustable?
No
Q2116
Q2123
D2103
Yes
R2139 and R2140 are normally adjustable?
No
Q2124
Q2125
Q2126
Yes
R2105 and R2107 are nomally adjustable?
No
Q2115
D2104
Yes
R2113 and R2115 are normally adjustable?
No
Q2122
D2105
Yes
Waveform at IC2101 pin ⑰ is as shown in Fig (F)?
Yes
R2481
R : IC2102
G : IC2104
B : IC2103
No
IC2101


D
R2106 and R2108 are normally adjustable?
No
Q2122
D2105
Yes
R2114 and R2116 are normally adjustable?
No
Q2115
D2104
Yes
Waveform at C2101 pin ③ is as shown in Fig (E)?
Yes
R2481
R : IC2102
G : IC2104
B : IC2103
No
IC2101
E
RH and BH static convergence are adjustable?
Yes
IC1501
No
RV and BV static convergence are adjustable?
Yes
IC1501
No
IC001, IC006


(E) Pin ③
4.4Vp-p
1V
(F) Pin ⑰
4.4Vp-p
1V
(G) Pin ⑫
4.4Vp-p
1V

PROTECTION CIRCUIT BLOCK DIAGRAM



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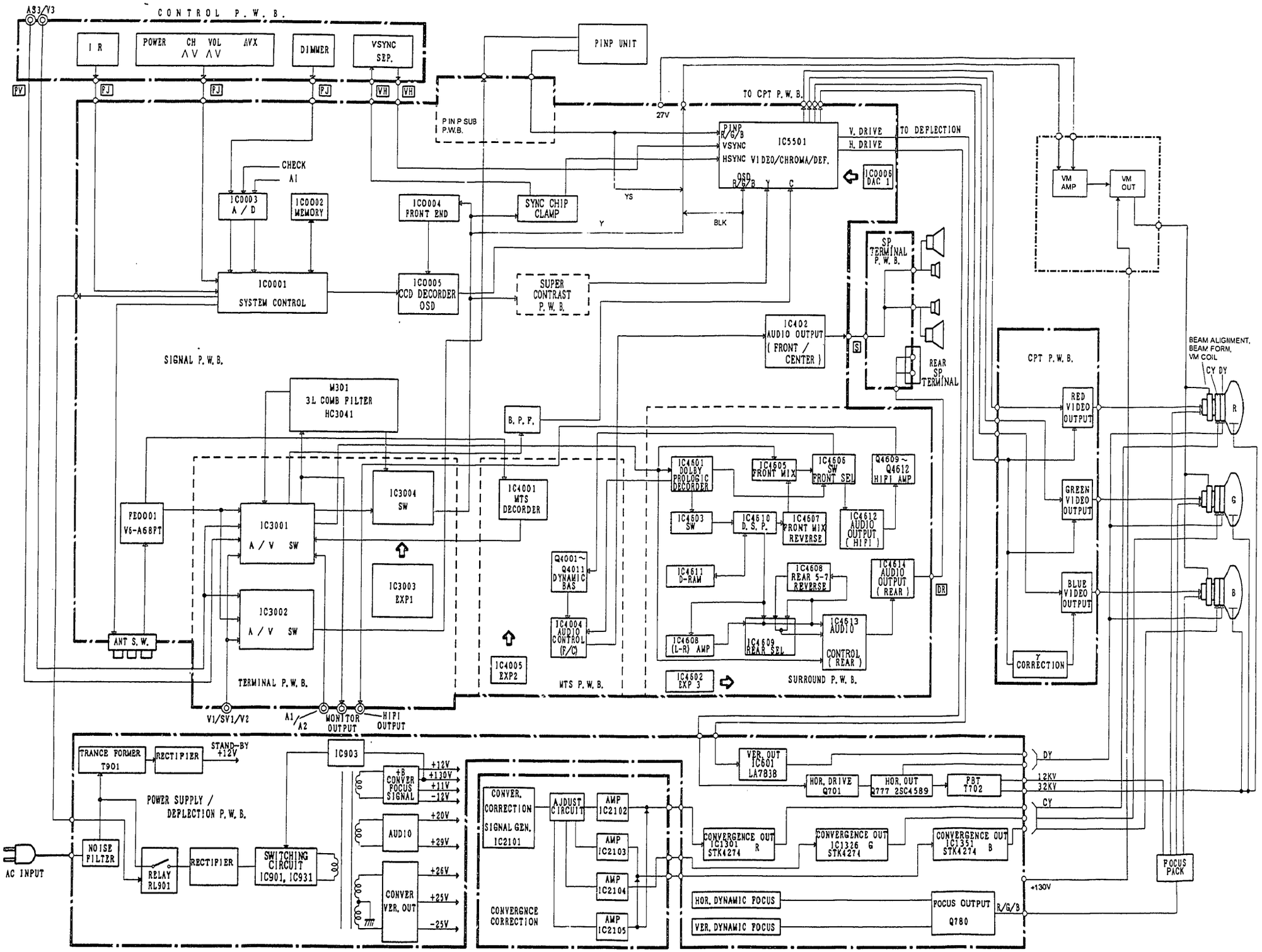
BLOCK DIAGRAM



PRINTED CIRCUIT BOARD

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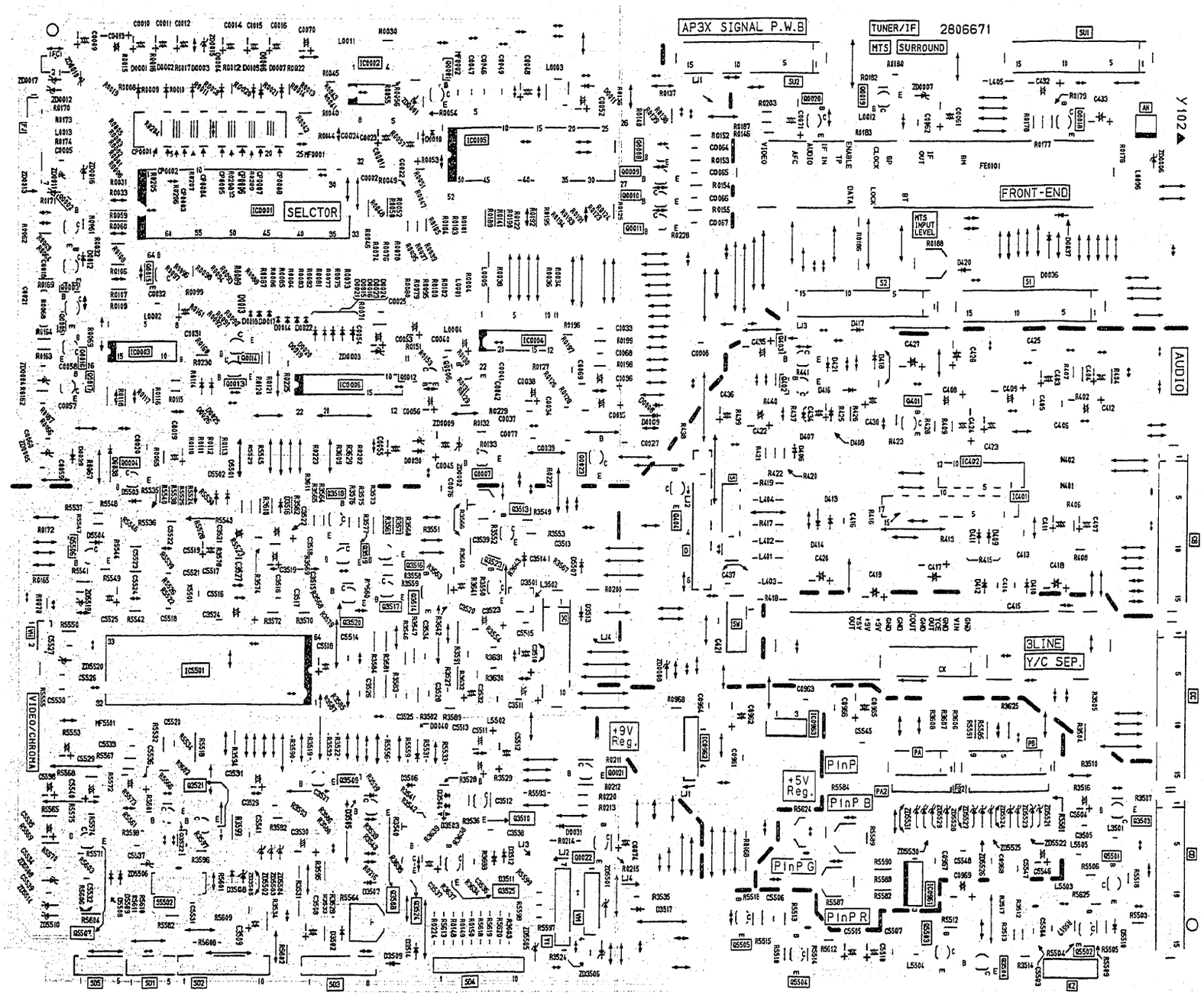
SIGNAL P.C.B.



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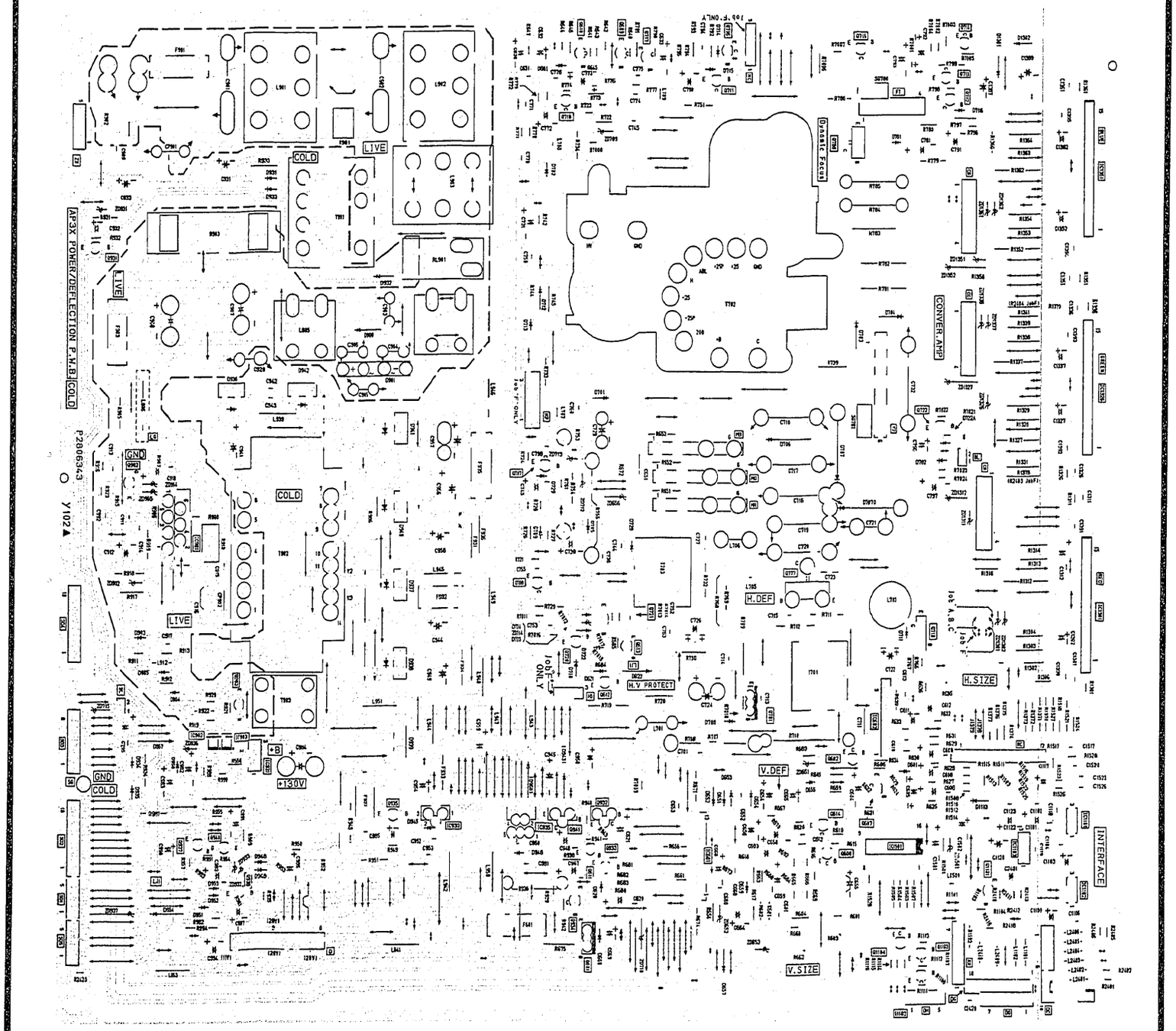
POWER/DEFLECTION P.C.B.



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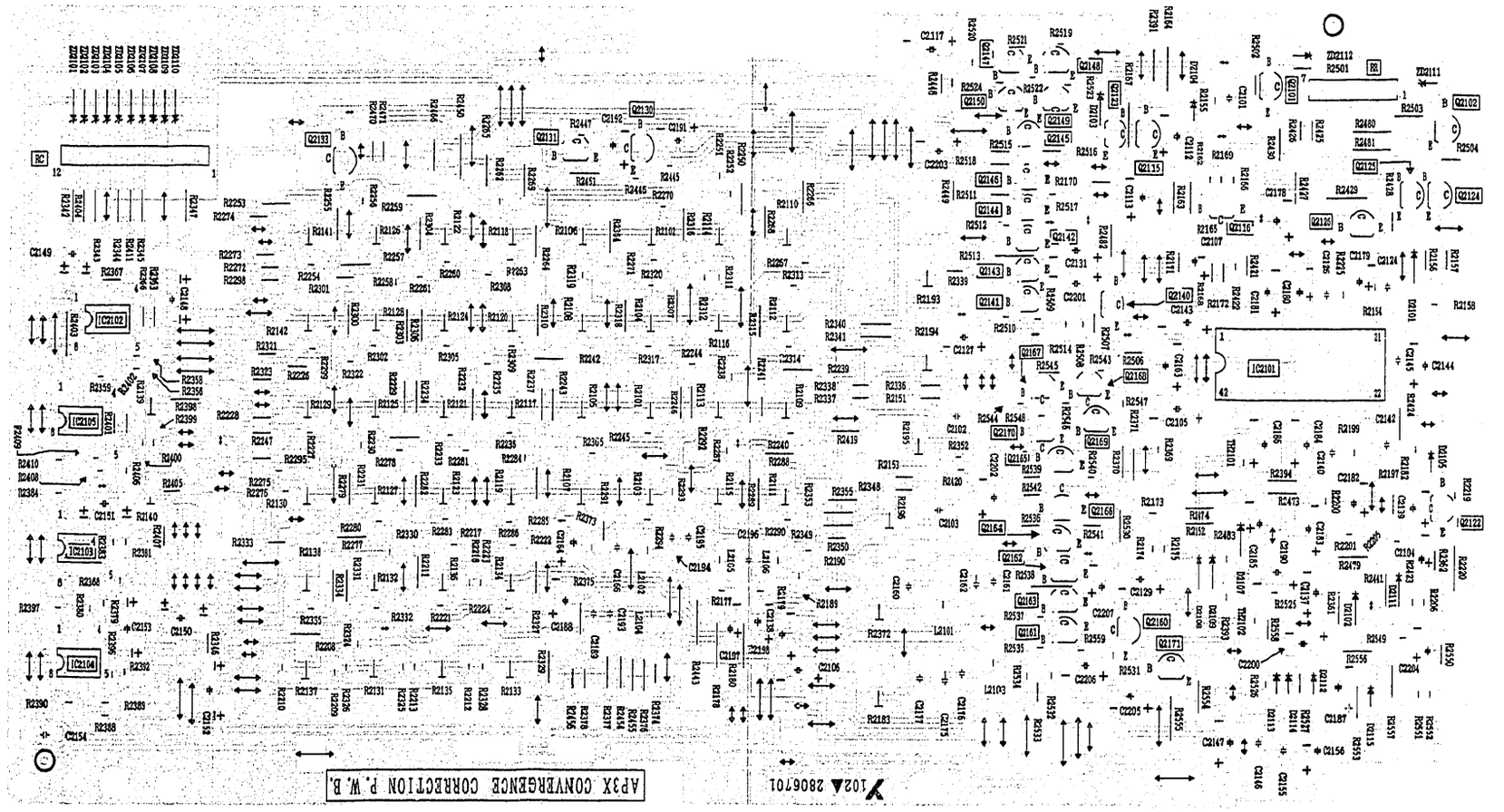
CONVERGENCE CORRECTION P.C.B.



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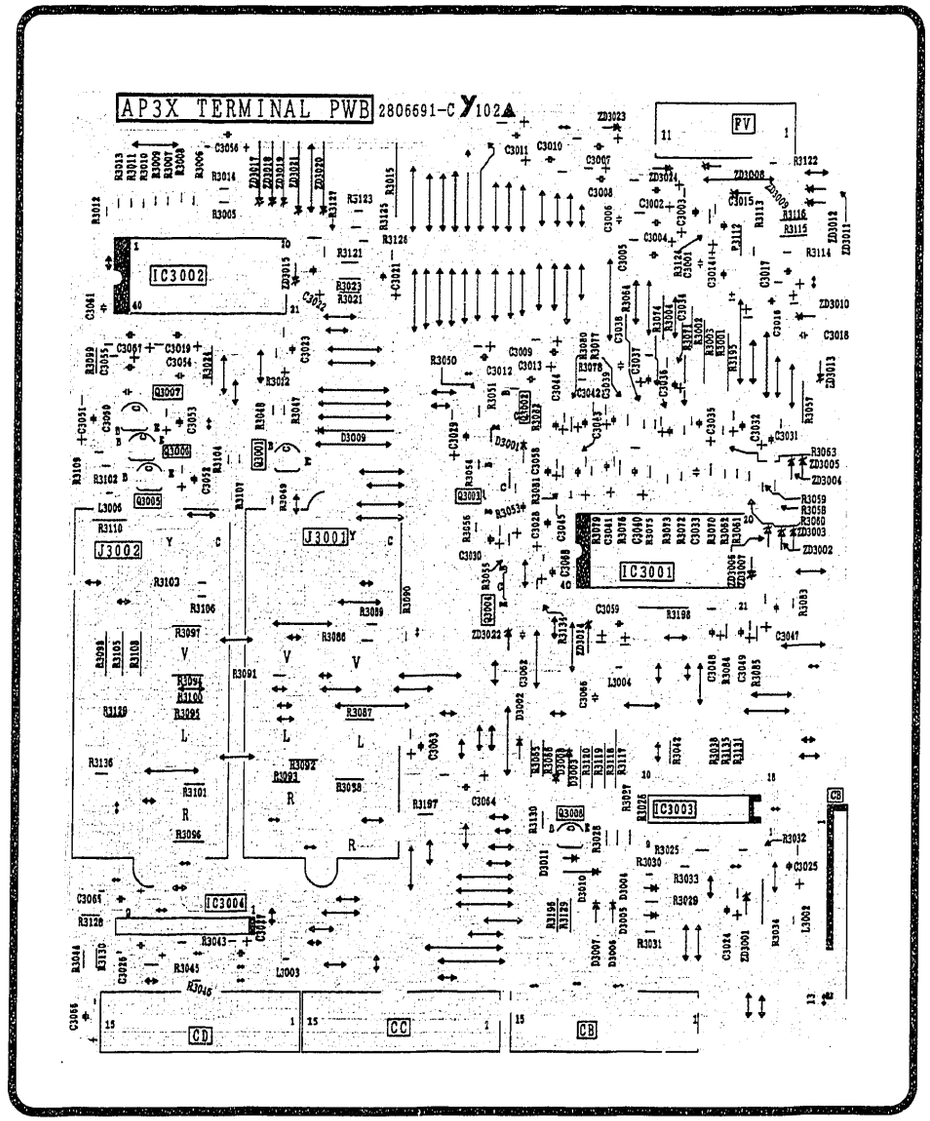
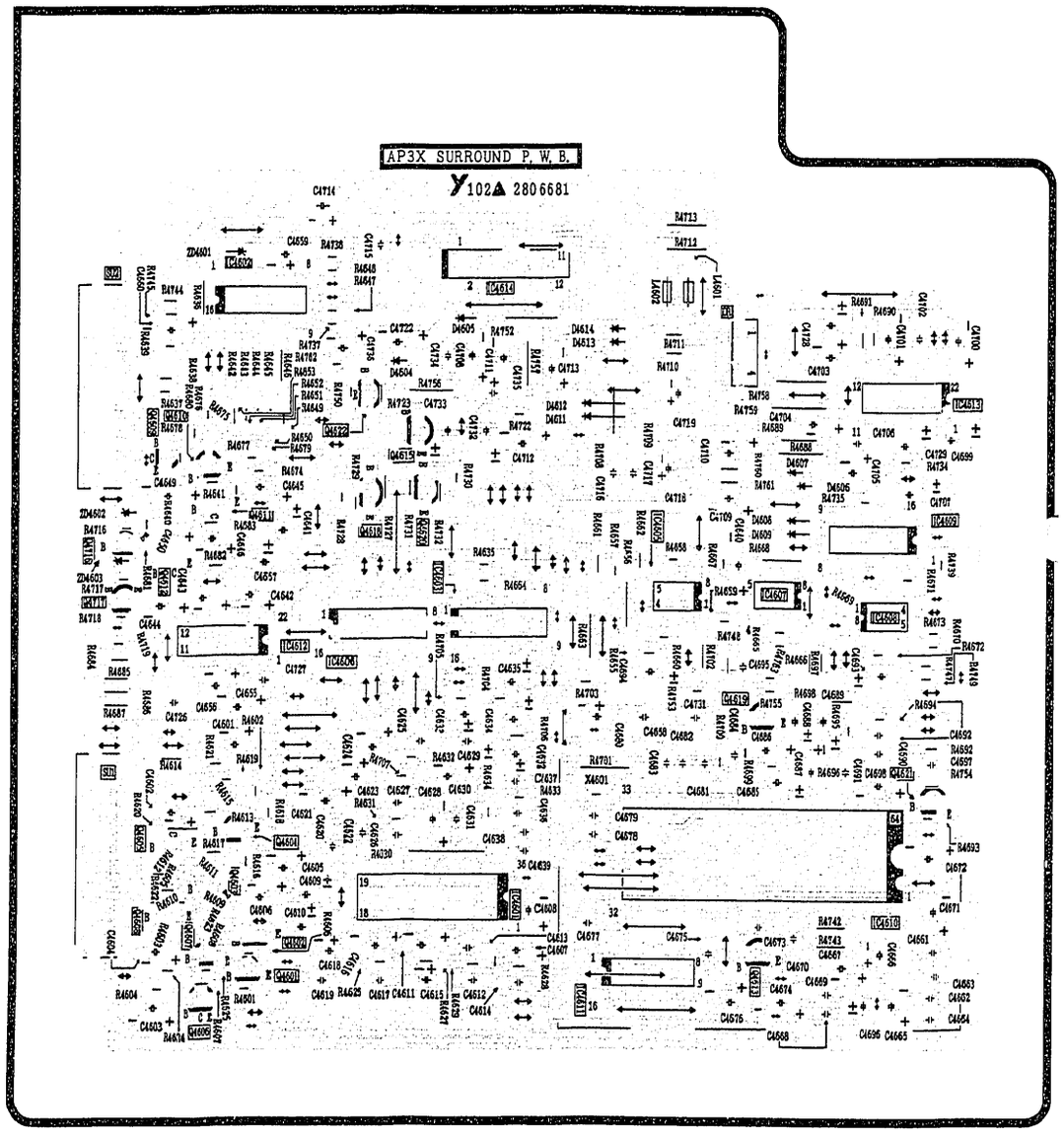
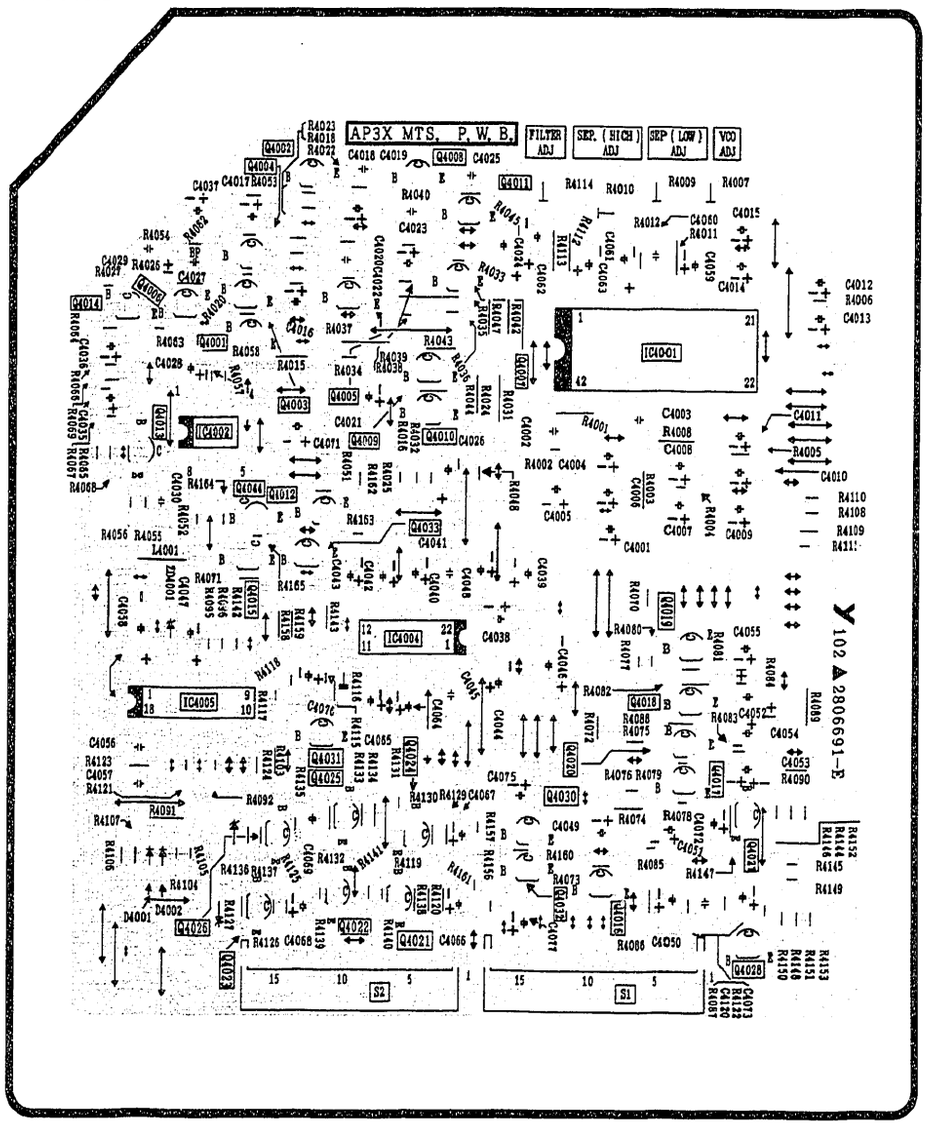
TERMINAL P.C.B.



SURROUND P.C.B.

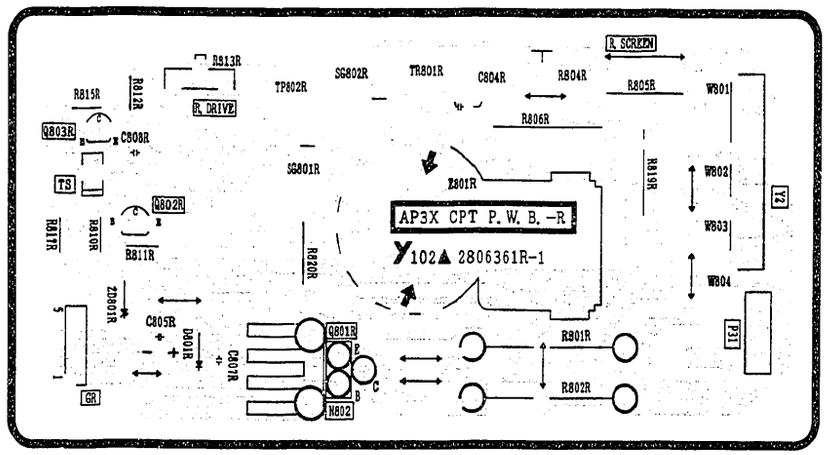


MTS P.C.B.

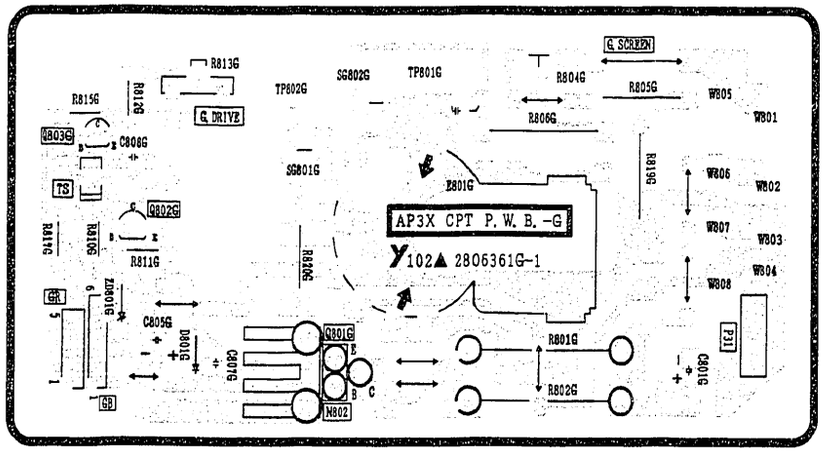


PRINTED CIRCUIT BOARD

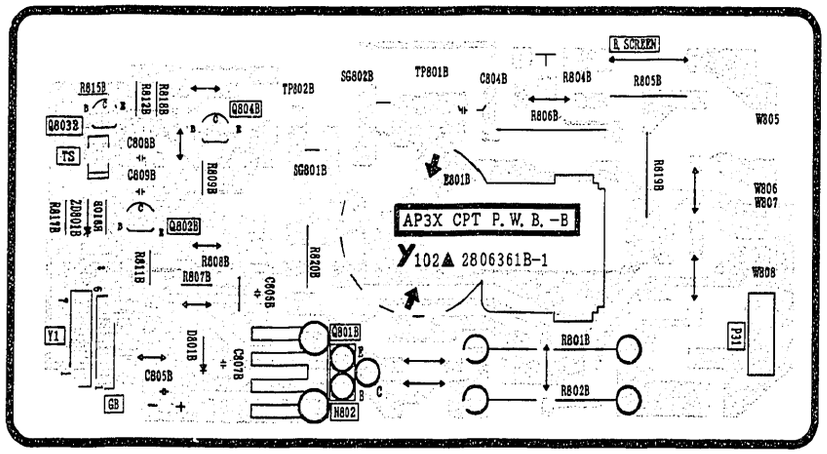
RED C.P.T. P.C.B.



GREEN C.P.T. P.C.B.



BLUE C.P.T. P.C.B.



PRINTED CIRCUIT BOARD

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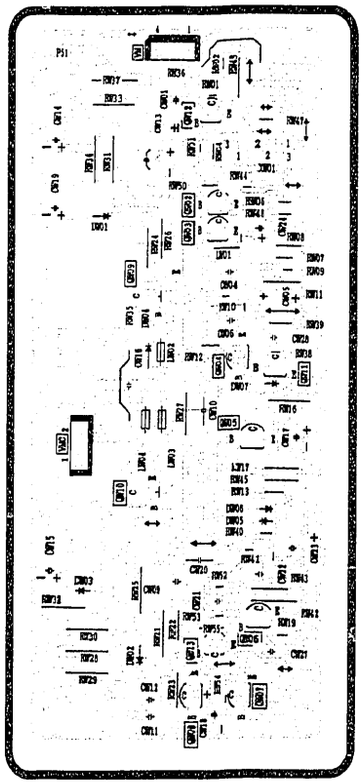
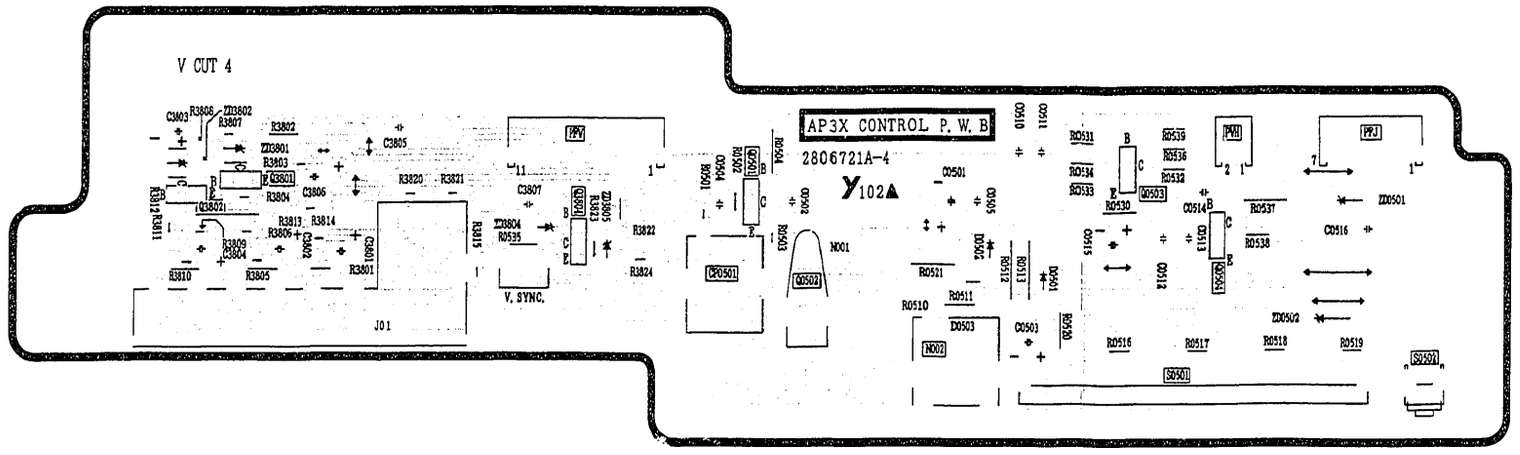
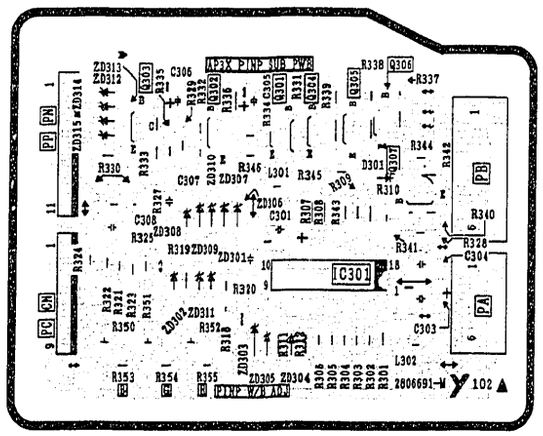
VM P.W.B.



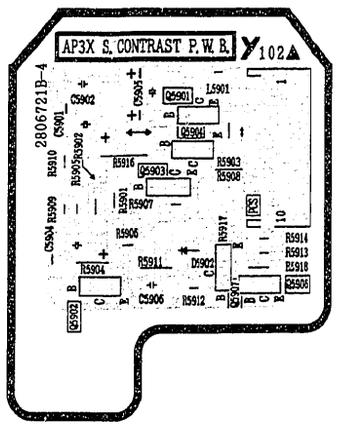
CONTROL P.C.B.



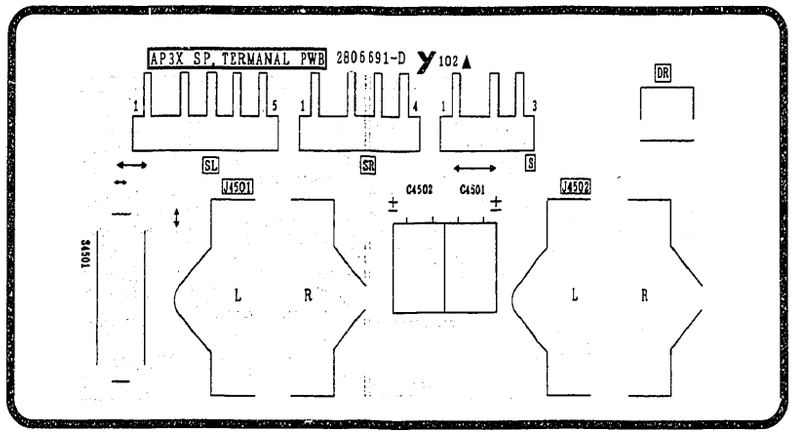
P IN P SUB P.C.B.



SUPER CONTRAST P.C.B.



SPEAKER TERMINAL P.C.B.



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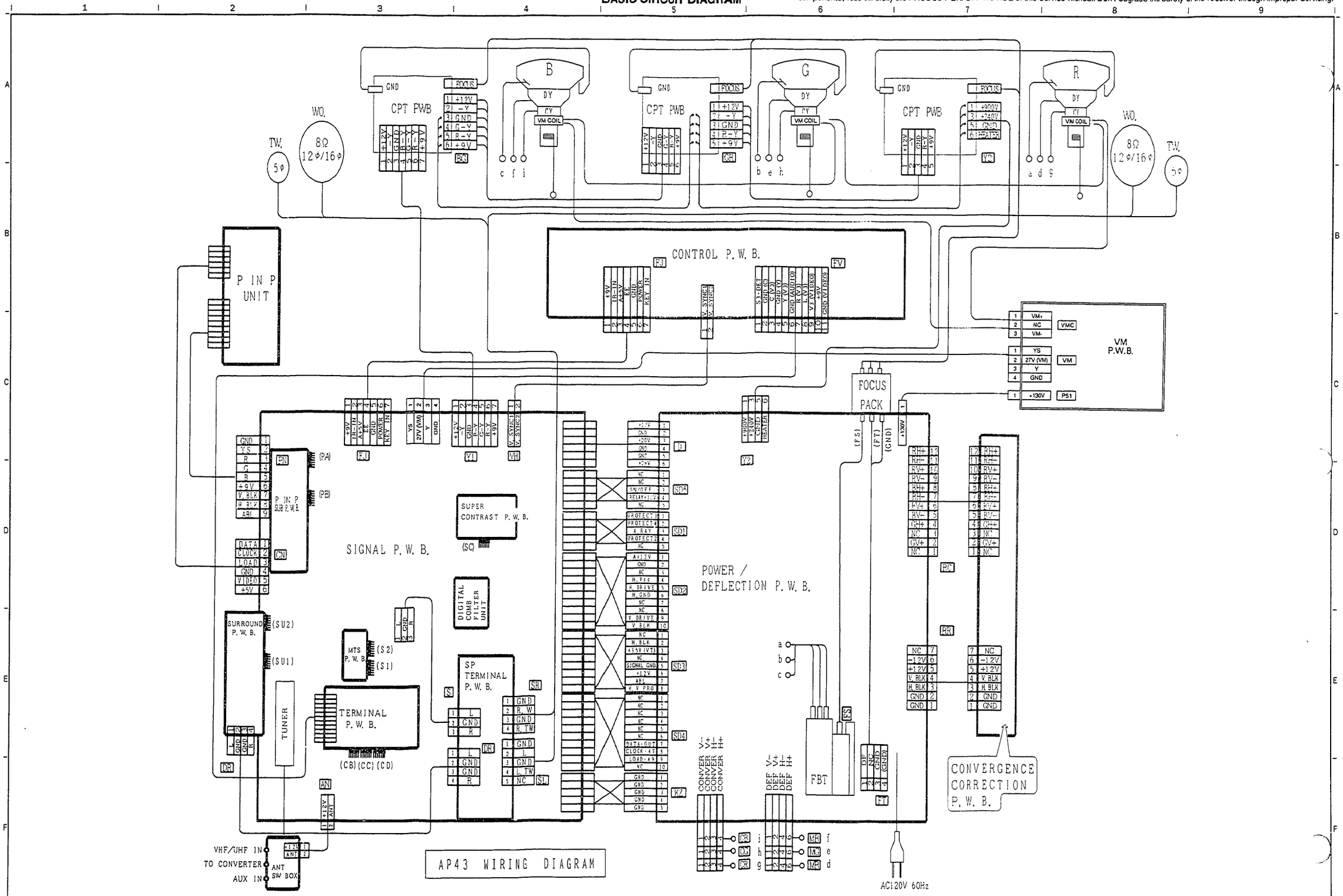
BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



AP43 WIRING DIAGRAM

• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

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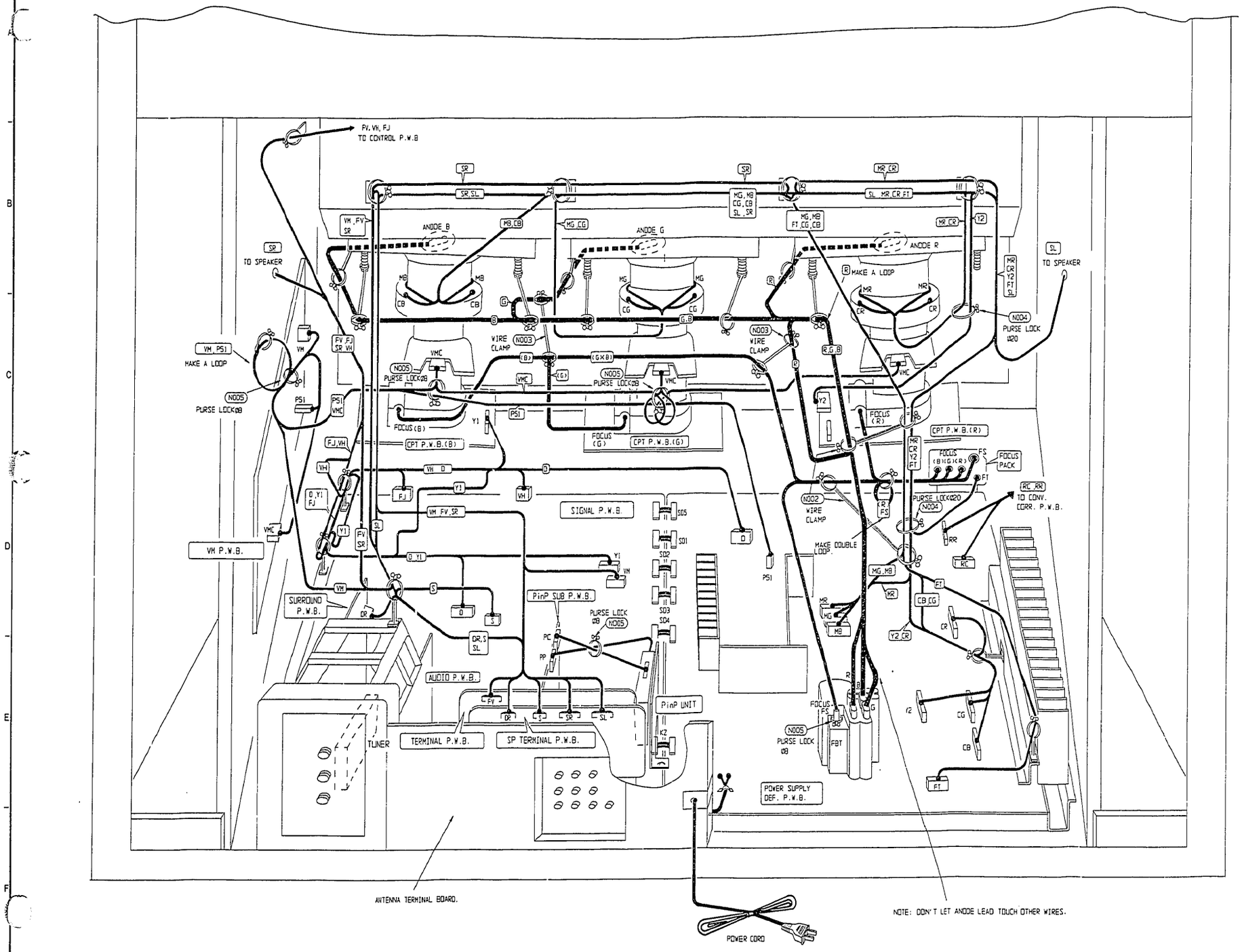
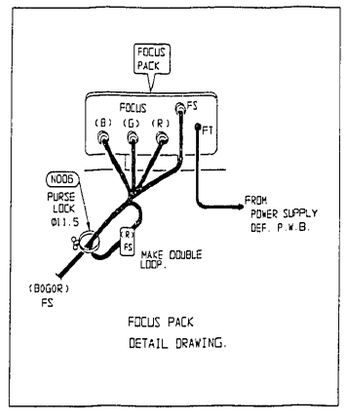
AP43 CHASSIS WIRING DRESS DRAWING





FOCUS PACK
DETAIL DRAWING.

• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

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BASIC CIRCUIT DIAGRAM

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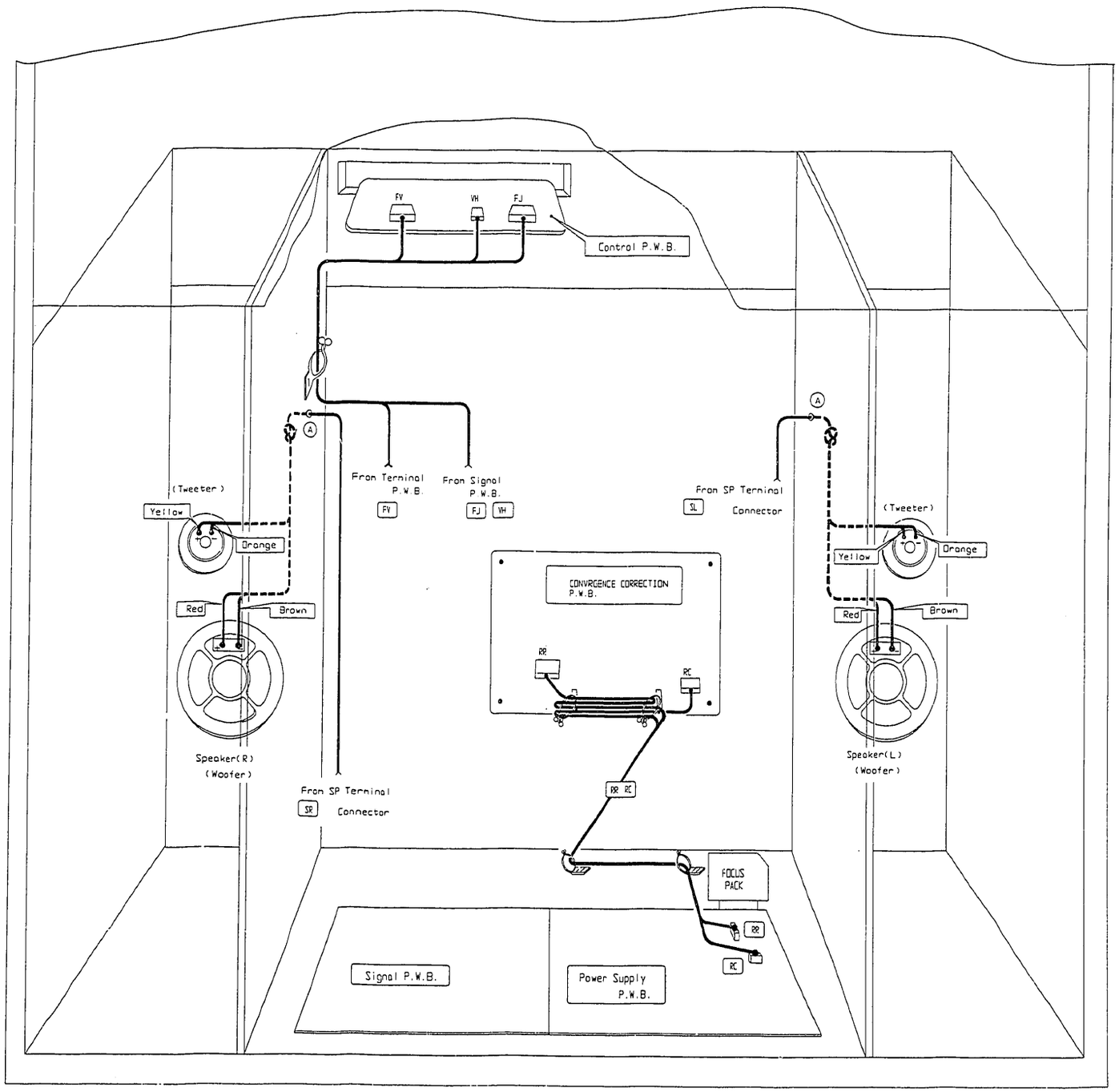
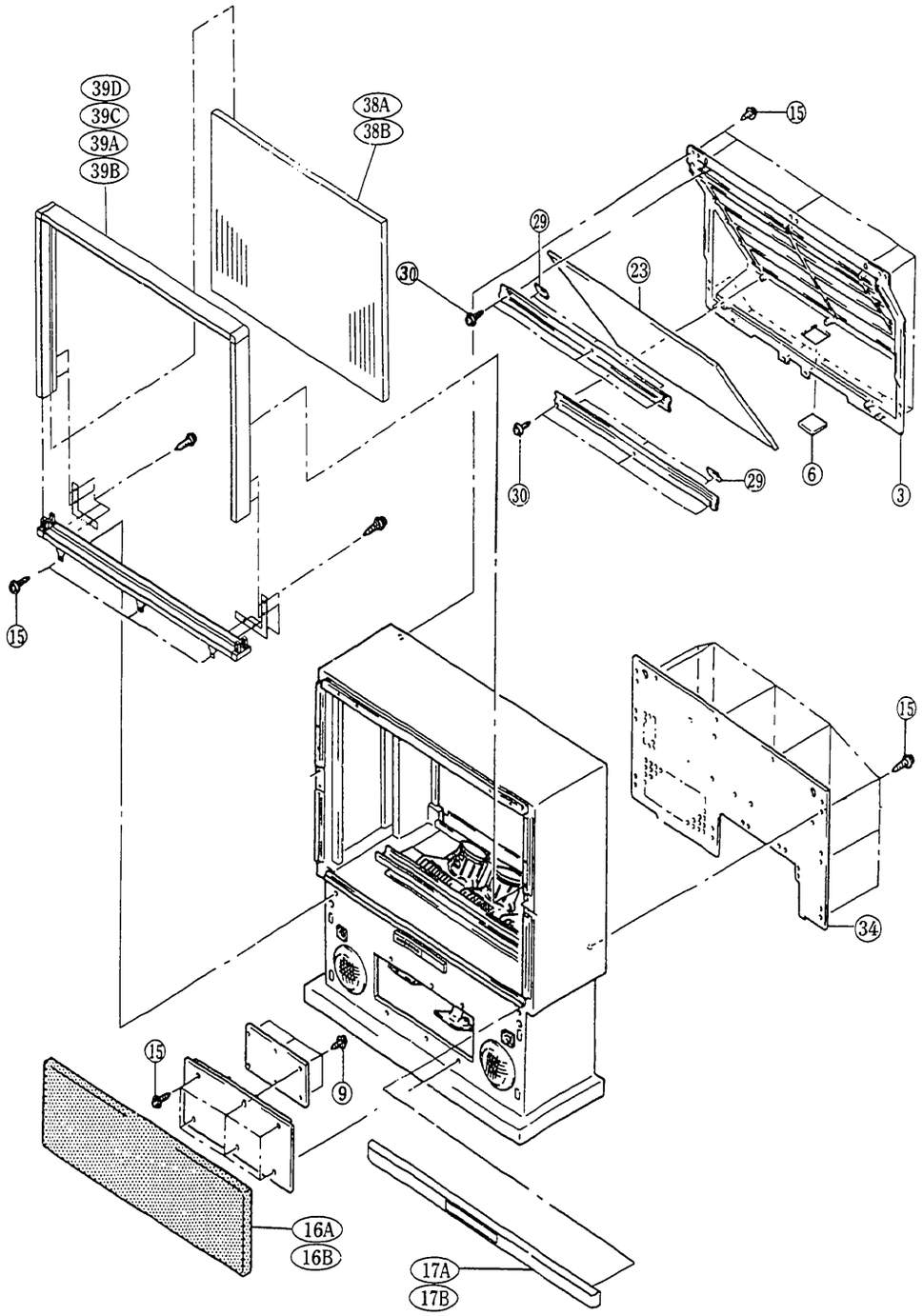
AP43 CHASSIS WIRING DRESS DRAWING.



• Since this is a basic circuit diagram, the value of the parts is subject to be altered for improvement.

• All DC voltage to be measured with a tester (100kΩ/V). Voltage taken on a complex color bar signal including a standard color bar signal.

EXPLODED VIEW (1 / 3)



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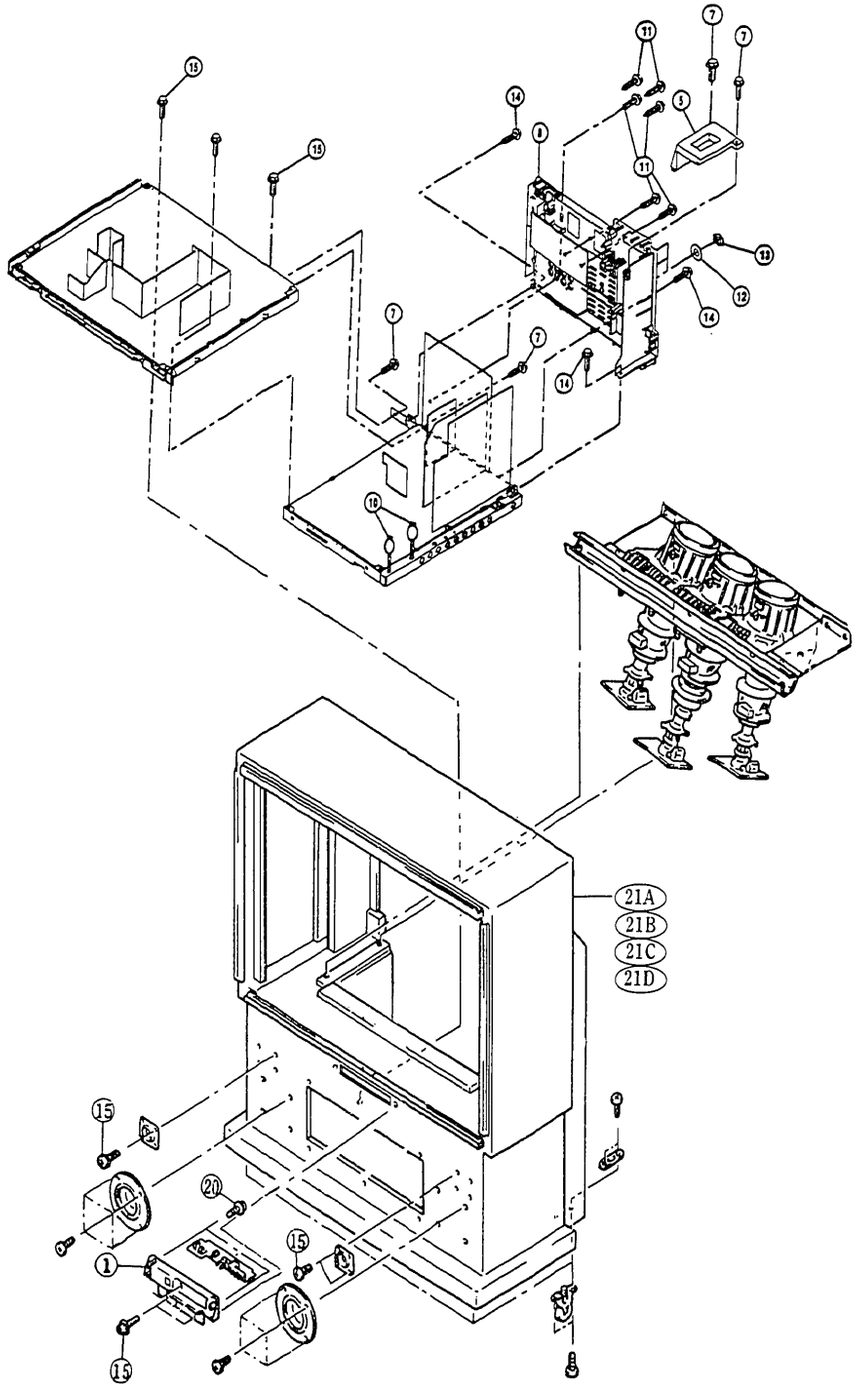
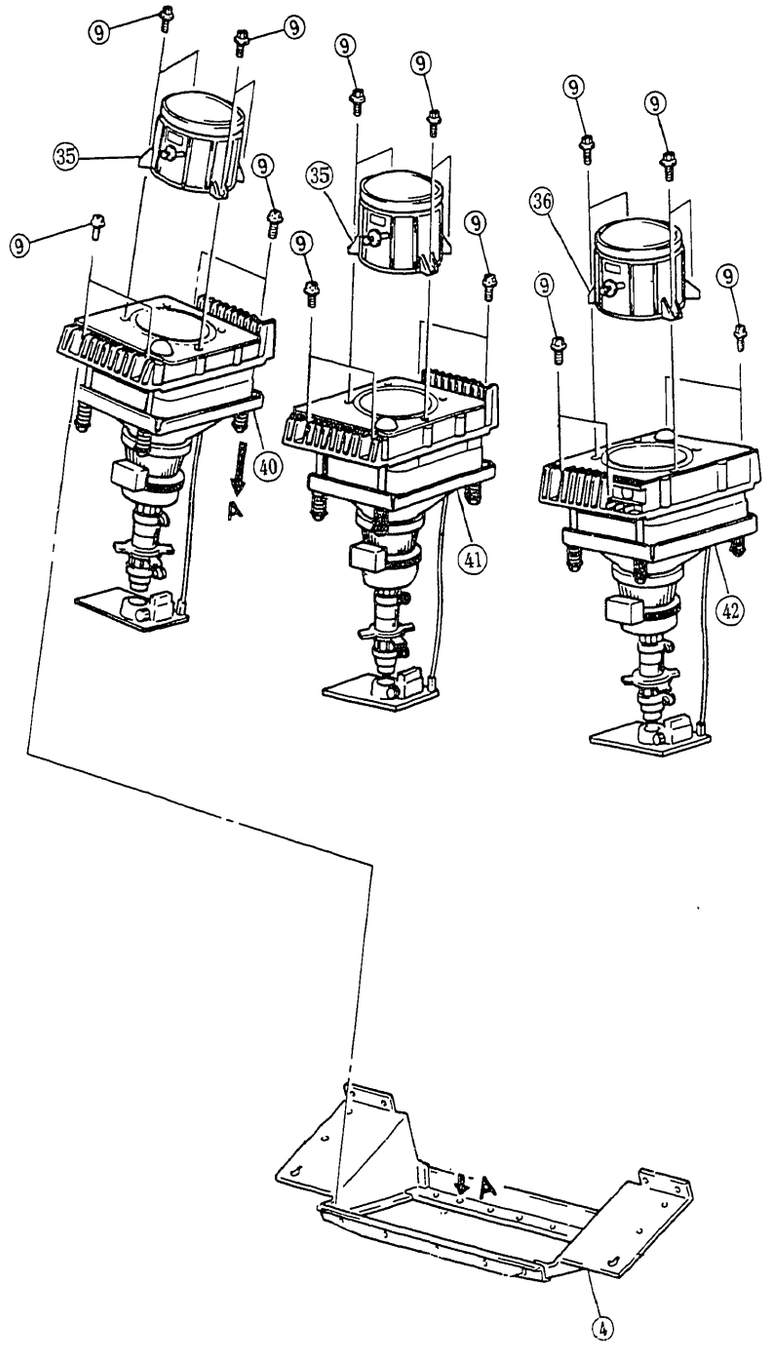
EXPLODED VIEW (2 / 3)



EXPLODED VIEW (3 / 3)



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REPLACEMENT PARTS LIST

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ABBREVIATIONS

Capacitors..... CD:Ceramic Disc, PF:PF, EL: EL, PP: Polypropylene, PR: Paper, TA: Tantalum, TM: Trimmer
Resistors..... CF: CF, CC: Carbon Composition, MF: Metal oxide Film, VR: Variable Resistor, WW: Wire Wound, FR: Fuse Resistor, MG: Metal Glazed
Semiconductors.... TR: Transistor, DI: diode, ZD: Zener Diode, VA: Varistor, TH: Thermistor, IC: Integrated Circuit

SYMBOL NO.	PART NO.	PART DESCRIPTION
		CAPACITORS
CW01	0284621R	EL 0.47MF 50V
CW04	0890081R	CD 330PF +-10% 50V
CW05	800049	EL 100MF 16V
CW06	880044	PF 0.01MF 16V
CW09	890074	CD 100PF +-5% 50V
CW10	244541	CD 0.01MF +-10% 500V
CW11	890074	CD 100PF +-5% 50V
CW12	244509	CD 4700PF +-5% 50V
CW13	253960	EL 100MF 160V
CW14	0253959F	EL 47MF 160V
CW15	253957	EL 22MF 160V
CW16	247848	CD 56PF +-5% 500V
CW17	800074	EL 470MF 16V
CW18	800042	EL 47MF 25V
CW19	0253959F	EL 47MF 160V
CW20	244541	CD 0.01MF +-10% 500V
CW21	276717	PF 0.1MF +-5% 50V
CW22	276717	PF 0.1MF +-5% 50V
CW23	800049	EL 100MF 16V
CW24	800041	EL 47MF 16V
CW28	890077	CD 180PF +-10% 50V
C0001	0800048	EL 100MF 10V
C0002	0244171	CD 0.01MF +80-20% 50V
C0005	0244171	CD 0.01MF +80-20% 50V
C0006	276717	PF 0.1MF +-5% 50V
C0009	0800009	EL 4.7MF 25V
C0010	0800009	EL 4.7MF 25V
C0011	0800009	EL 4.7MF 25V
C0012	0800009	EL 4.7MF 25V
C0013	0800009	EL 4.7MF 25V
C0014	0800009	EL 4.7MF 25V
C0015	0800009	EL 4.7MF 25V
C0018	0880048	PF 0.022MF +-10% 50V
C0019	800023	EL 22MF 16V
C0020	0890087	CD 1000PF +-10% 50V
C0021	276717	PF 0.1MF +-5% 50V
C0022	0800003	EL 1MF 50V
C0023	0890067	CD 33PF +-5% 50V
C0024	0890067	CD 33PF +-5% 50V
C0025	0880053	PF 0.047MF +-10% 50V
C0027	0880051	PF 0.033MF +-10% 50V
C0031	0800048	EL 100MF 10V
C0032	0244171	CD 0.01MF +80-20% 50V
C0033	0890074	CD 100PF +-5% 50V
C0034	0880051	PF 0.033MF +-10% 50V
C0035	800009	EL 4.7MF 25V
C0036	0800009	EL 4.7MF 25V
C0037	0890069	CD 47PF +-5% 50V
C0038	0800048	EL 100MF 10V
C0039	0244171	CD 0.01MF +80-20% 50V
C0040	0800003	EL 1MF 50V
C0041	0880046	PF 0.015MF +-10% 50V
C0042	0244107	CD 3300PF +-10% 50V
C0045	0800049	EL 100MF 16V
C0046	0890067	CD 33PF +-5% 50V
C0047	0890067	CD 33PF +-5% 50V
C0048	0800048	EL 100MF 10V
C0049	0244171	CD 0.01MF +80-20% 50V
C0052	0800003	EL 1MF 50V
C0053	0800049	EL 100MF 16V
C0054	0800039	EL 47MF 10V
C0055	0800015	EL 10MF 16V
C0056	0800048	EL 100MF 10V
C0057	0890074	CD 100PF +-5% 50V
C0058	0890071	CD 56PF +-5% 50V
C0059	0890087	CD 1000PF +-10% 50V
C0060	0890079R	CD 270PF +-10% 50V
C0061	0800049	EL 100MF 16V
C0062	0244171	CD 0.01MF +80-20% 50V
C0064	0890074	CD 100PF +-5% 50V
C0065	0890074	CD 100PF +-5% 50V
C0066	0890074	CD 100PF +-5% 50V
C0067	0890074	CD 100PF +-5% 50V
C0068	0890074	CD 100PF +-5% 50V
C0069	0890074	CD 100PF +-5% 50V
C0070	0800049	EL 100MF 16V
C0071	0800049	EL 100MF 16V
C0074	0800074	EL 470MF 16V
C0076	890033	CD680PF +-10% 50V
C0077	0890077	CD 180PF +-10% 50V
C0501	0800023	EL 22MF 16V
C0502	0244171	CD 0.01MF +80-20% 50V

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SYMBOL NO.	PART NO.	PART DESCRIPTION
C0503	0800003	EL 1MF 50V
C0504	0244171	CD 0.01MF +80-20% 50V
C0505	0244171	CD 0.01MF +80-20% 50V
C0510	0880011	PF 0.015MF +-10% 50V
C0511	880013	PF 0.033MF +-10% 50V
C0512	0880006	PF 3300PF +-10% 50V
C0513	0880006	PF 3300PF +-10% 50V
C0514	0880016	PF 0.1MF +-10% 50V
C0515	0800015	EL 10MF 16V
C0516	0880016	PF 0.1MF +-10% 50V
C0961	276717	PF 0.1MF +-5% 50V
C0962	0800075	EL 470MF 25V
C0963	276717	PF 0.1MF +-5% 50V
C0964	276717	PF 0.1MF +-5% 50V
C0965	0800075	EL 470MF 25V
C0966	276717	PF 0.1MF +-5% 50V
C0967	276717	PF 0.1MF +-5% 50V
C0968	276717	PF 0.1MF +-5% 50V
C0969	0800075	EL 470MF 25V
C1109	0800049	EL 100MF 16V
C1117	0800049	EL 100MF 16V
C1301	0890087	CD 1000PF +-10% 50V
C1302	0800044	EL 47MF 50V
C1311	0890087	CD 1000PF +-10% 50V
C1312	0800044	EL 47MF 50V
C1326	0890087	CD 1000PF +-10% 50V
C1327	0800044	EL 47MF 50V
C1336	0890087	CD 1000PF +-10% 50V
C1337	0800044	EL 47MF 50V
C1351	0890087	CD 1000PF +-10% 50V
C1352	0800044	EL 47MF 50V
C1361	0890087	CD 1000PF +-10% 50V
C1362	0800044	EL 47MF 50V
C1387	0258178G	EL 470MF 63V
C1389	0258178G	EL 470MF 63V
C1501	0800041	EL 47MF 16V
C1502	0800041	EL 47MF 16V
C1517	0880044	PF 0.01MF +-10% 50V
C1520	0880044	PF 0.01MF +-10% 50V
C1523	0880044	PF 0.01MF +-10% 50V
C1526	0880044	PF 0.01MF +-10% 50V
C2101	0244136	CD 270PF +-10% 50V
C2103	0880001	PF 680PF +-10% 50V
C2104	0800015	EL 10MF 16V
C2105	0800003	EL 1MF 50V
C2106	0800015	EL 10MF 16V
C2107	0800015	EL 10MF 16V
C2112	0800001	EL 0.47MF 50V
C2113	0800015	EL 10MF 16V
C2117	0800015	EL 10MF 16V
C2124	0880005	PF 2200PF +-10% 50V
C2126	0299001	PP 0.001MF +-2% 100V
C2127	0800003	EL 1MF 50V
C2129	0800015	EL 10MF 16V
C2131	0800015	EL 10MF 16V
C2137	0800049	EL 100MF 16V
C2138	0800015	EL 10MF 16V
C2139	0800015	EL 10MF 16V
C2140	0880014	PF 0.047MF +-10% 50V
C2142	0880016	PF 0.1MF +-10% 50V
C2143	0800049	EL 100MF 16V
C2144	0800041	EL 47MF 16V
C2145	0244141	CD 0.01MF +-10% 50V
C2146	0244141	CD 0.01MF +-10% 50V
C2147	0800041	EL 47MF 16V
C2148	0284623R	EL 1MF 50V
C2149	0284623R	EL 1MF 50V
C2150	0284623R	EL 1MF 50V
C2151	0284623R	EL 1MF 50V
C2152	0284623R	EL 1MF 50V
C2153	0284623R	EL 1MF 50V
C2154	0244229	CD 150PF +-10% 50V
C2155	0244141	CD 0.01MF +-10% 50V
C2156	0800044	EL 47MF 50V
C2160	0880011	PF 0.015MF +-10% 50V
C2161	0880009	PF 0.01MF +-10% 50V
C2162	0299029	PP 0.015MF +-2% 100V
C2163	0800003	EL 1MF 50V
C2164	0800003	EL 1MF 50V
C2166	880013	PF0.033MF +-10% 50V
C2175	0299029	PP 0.015MF +-2% 100V
C2176	0880009	PF 0.01MF +-10% 50V
C2177	0880011	PF 0.015MF +-10% 50V
C2178	0800003	EL 1MF 50V
C2179	0800003	EL 1MF 50V
C2180	0800003	EL 1MF 50V
C2181	0800003	EL 1MF 50V
C2182	0800015	EL 10MF 16V
C2183	0800003	EL 1MF 50V
C2184	0800015	EL 10MF 16V
C2185	0800003	EL 1MF 50V
C2186	0800003	EL 1MF 50V
C2187	0800003	EL 1MF 50V
C2188	0800003	EL 1MF 50V
C2189	880013	PF 0.033MF +-10% 50V
C2190	0800015	EL 10MF 16V
C2191	0800003	EL 1MF 50V
C2192	0800015	EL 10MF 16V
C2195	0880012	PF 0.022MF +-10% 50V
C2196	0880012	PF 0.022MF +-10% 50V
C2197	0800003	EL 1MF 50V
C2198	0800003	EL 1MF 50V
C3006	0244171	CD 0.01MF +80-20% 50V
C3007	0800015	EL 10MF 16V
C3010	0800015	EL 10MF 16V
C3013	0800015	EL 10MF 16V

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SYMBOL NO.	PART NO.	PART DESCRIPTION
C3014	0284638	EL 10MF 16V
C3016	0284638	EL 10MF 16V
C3018	0244171	CD 0.01MF +80-20% 50V
C3019	0800023	EL 22MF 16V
C3021	0800015	EL 10MF 16V
C3024	0800047	EL 100MF 6.3V
C3025	0800041	EL 47MF 16V
C3026	0800015	EL 10MF 16V
C3027	0800041	EL 47MF 16V
C3028	0800041	EL 47MF 16V
C3029	0800009	EL 4.7MF 25V
C3030	0800015	EL 10MF 16V
C3031	0800003	EL 1MF 50V
C3032	0800003	EL 1MF 50V
C3038	0244171	CD 0.01MF +80-20% 50V
C3039	0800015	EL 10MF 16V
C3040	0800003	EL 1MF 50V
C3041	0800003	EL 1MF 50V
C3042	0800015	EL 10MF 16V
C3043	0800003	EL 1MF 50V
C3044	0800015	EL 10MF 16V
C3045	0800023	EL 22MF 16V
C3047	0800015	EL 10MF 16V
C3048	0800003	EL 1MF 50V
C3049	0800003	EL 1MF 50V
C3051	0800041	EL 47MF 16V
C3052	0800074	EL 470MF 16V
C3055	0800015	EL 10MF 16V
C3056	0800015	EL 10MF 16V
C3058	0800003	EL 1MF 50V
C3059	0284638	EL 10MF 16V
C3060	0244171	CD 0.01MF +80-20% 50V
C3061	276717	PF 0.1MF +-5% 50V
C3062	276717	PF 0.1MF +-5% 50V
C3063	0800015	EL 10MF 16V
C3064	0800015	EL 10MF 16V
C3065	0800015	EL 10MF 16V
C3066	0800015	EL 10MF 16V
C3067	0800041	EL 47MF 16V
C3068	0800041	EL 47MF 16V
C308	276717	PF 0.1MF +-5% 50V
C3504	0800049	EL 100MF 16V
C3505	0244171	CD 0.01MF +80-20% 50V
C3508	0800015	EL 10MF 16V
C3509	0800015	EL 10MF 16V
C3515	0244171	CD 0.01MF +80-20% 50V
C3516	0244171	CD 0.01MF +80-20% 50V
C3517	0244171	CD 0.01MF +80-20% 50V
C3518	0244171	CD 0.01MF +80-20% 50V
C3519	0800003	EL 1MF 50V
C3520	0800003	EL 1MF 50V
C3521	0800015	EL 10MF 16V
C3522	0800003	EL 1MF 50V
C3523	0800015	EL 10MF 16V
C3524	0800015	EL 10MF 16V
C3525	0244171	CD 0.01MF +80-20% 50V
C3526	0244171	CD 0.01MF +80-20% 50V
C3527	0244171	CD 0.01MF +80-20% 50V
C3528	0244171	CD 0.01MF +80-20% 50V
C3530	0800023	EL 22MF 16V
C3531	0800015	EL 10MF 16V
C3532	0800015	EL 10MF 16V
C3534	0244171	CD 0.01MF +80-20% 50V
C3536	0890087	CD 1000PF +-10% 50V
C3537	0800015	EL 10MF 16V
C3538	276717	PF 0.1MF +-5% 50V
C3539	0890075	CD 120PF +-5% 50V
C3540	0800049	EL 100MF 16V
C3801	0800015	EL 10MF 16V
C3802	0800015	EL 10MF 16V
C3803	0800041	EL 47MF 16V
C3804	0800015	EL 10MF 16V
C3805	0244171	CD 0.01MF +80-20% 50V
C3806	0800015	EL 10MF 16V
C3807	0244171	CD 0.01MF +80-20% 50V
C4001	0800009	EL 4.7MF 25V
C4002	276717	PF 0.1MF +-5% 50V
C4003	0880044	PF 0.01MF +-10% 50V
C4004	0800001	EL 0.47MF 50V
C4005	0800074	EL 470MF 16V
C4006	0800001	EL 0.47MF 50V
C4007	0800001	EL 0.47MF 50V
C4008	0800009	EL 4.7MF 25V
C4009	0800001	EL 0.47MF 50V
C4010	0800005	EL 2.2MF 50V
C4011	0800007	EL 3.3MF 50V
C4012	0800001	EL 0.47MF 50V
C4013	0800001	EL 0.47MF 50V
C4014	0292714F	TA 10MF +-10% 16V
C4015	0800015	EL 10MF 16V
C4016	0800009	EL 4.7MF 25V
C4017	0800003	EL 1MF 50V
C4018	0276719	PF 0.15MF +-5% 50V
C4019	0800003	EL 1MF 50V
C4020	0276719	PF 0.15MF +-5% 50V
C4021	0800009	EL 4.7MF 25V
C4022	0800003	EL 1MF 50V
C4023	0276719	PF 0.15MF +-5% 50V
C4024	0800003	EL 1MF 50V
C4025	0276719	PF 0.15MF +-5% 50V
C4026	0800041	EL 47MF 16V
C403	0800003	EL 1MF 50V
C4038	0800015	EL 10MF 16V
C4039	0800074	EL 470MF 16V
C404	0800003	EL 1MF 50V
C4040	0880044	PF 0.01MF +-10% 50V

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SYMBOL NO.	PART NO.	PART DESCRIPTION
C4041	0253943	EL 0.33MF 50V
C4042	0800041	EL 47MF 16V
C4043	0800003	EL 1MF 50V
C4044	0253943	EL 0.33MF 50V
C4045	0880044	PF 0.01MF +-10% 50V
C4046	0800015	EL 10MF 16V
C4047	0800049	EL 100MF 16V
C4048	0800049	EL 100MF 16V
C405	0244105	CD 2200PF +-10% 50V
C4054	0800015	EL 10MF 16V
C4055	0800015	EL 10MF 16V
C4056	0890069	CD 47PF +-5% 50V
C4057	0890069	CD 47PF +-5% 50V
C4058	0800048	EL 100MF 10V
C4059	0292712F	TA 3.3MF 16V
C406	0244105	CD 2200PF +-10% 50V
C4060	276717	PF 0.1MF +-5% 50V
C4061	0800041	EL 47MF 16V
C4062	0800009	EL 4.7MF 25V
C4063	0800009	EL 4.7MF 25V
C4064	0800015	EL 10MF 16V
C4065	0800015	EL 10MF 16V
C4071	0800074	EL 470MF 16V
C4072	0800015	EL 10MF 16V
C4073	0800015	EL 10MF 16V
C4075	0800015	EL 10MF 16V
C4076	0800015	EL 10MF 16V
C4077	0800015	EL 10MF 16V
C408	0800051	EL 100MF 25V
C409	0800042	EL 47MF 25V
C412	0800042	EL 47MF 25V
C414	0276717	PF 0.1MF +-5% 50V
C416	0276717	PF 0.1MF +-5% 50V
C417	0253934	EL 2200MF 35V
C418	0258192F	EL 2200MF 25V
C420	0258192F	EL 2200MF 25V
C421	0276721	PF 0.22MF +-5% 50V
C422	0800042	EL 47MF 25V
C424	0800051	EL 100MF 25V
C425	0244171	CD 0.01MF +80-20% 50V
C427	0800087	EL 2200MF 16V
C428	0800087	EL 2200MF 16V
C430	0800003	EL 1MF 50V
C432	0800066	EL 330MF 16V
C433	0800087	EL 2200MF 16V
C434	0800003	EL 1MF 50V
C435	0800015	EL 10MF 16V
C436	0800003	EL 1MF 50V
C437	0276717	PF 0.1MF +-5% 50V
C4501	0258616	EL 2.2MF 50V
C4502	0258616	EL 2.2MF 50V
C4605	0800015	EL 10MF 16V
C4606	0800015	EL 10MF 16V
C4607	0800041	EL 47MF 16V
C4608	0800049	EL 100MF 16V
C4609	0284638	EL 10MF 16V
C4610	0284638	EL 10MF 16V
C4611	0800105	EL 0.33MF 50V
C4612	0276717	PF 0.1MF +-5% 50V
C4613	0276717	PF 0.1MF +-5% 50V
C4614	0890085	CD 680PF +-10% 50V
C4615	0800012	EL 4.7MF 50V
C4616	0800012	EL 4.7MF 50V
C4617	0276719	PF 0.15MF +-5%50V
C4618	0800007	EL 3.3MF 50V
C4619	0276719	PF 0.15MF +-5%50V
C4620	0276719	PF 0.15MF +-5%50V
C4621	0800007	EL 3.3MF 50V
C4622	0276719	PF 0.15MF +-5%50V
C4623	0800012	EL 4.7MF 50V
C4624	0800012	EL 4.7MF 50V
C4625	0890085	CD 680PF +-10% 50V
C4626	0276717	PF 0.1MF +-5% 50V
C4627	0276717	PF 0.1MF +-5% 50V
C4628	0800105	EL 0.33MF 50V
C4629	0276717	PF 0.1MF +-5% 50V
C4630	0800049	EL 100MF 16V
C4631	0880066	PF 0.47MF +-10% 50V
C4632	0284638	EL 10MF 16V
C4633	0284638	EL 10MF 16V
C4634	0284638	EL 10MF 16V
C4635	0284638	EL 10MF 16V
C4636	0880046	PF 0.015MF +-10% 50V
C4637	0880044	PF 0.01MF +-10% 50V
C4638	0890085	CD 680PF +-10% 50V
C4639	0276717	PF 0.1MF +-5% 50V
C4640	0800015	EL 10MF 16V
C4641	0284638	EL 10MF 16V
C4642	0800041	EL 47MF 16V
C4643	0800105	EL 0.33MF 50V
C4644	0800041	EL 47MF 16V
C4645	0800015	EL 10MF 16V
C4646	0800015	EL 10MF 16V
C4649	0800015	EL 10MF 16V
C4650	0800015	EL 10MF 16V
C4655	0800003	EL 1MF 50V
C4656	0800105	EL 0.33MF 50V
C4657	0284638	EL 10MF 16V
C4658	0880044	PF 0.01MF +-10% 50V
C4659	0800015	EL 10MF 16V
C4660	0800015	EL 10MF 16V
C4661	0860059	PF 0.15MF 50V
C4662	0890076	CD 150PF +-10% 50V
C4663	0880048	PF 0.022MF +-10% 50V
C4664	0890087	CD 1000PF +-10% 50V
C4665	0800012	EL 4.7MF 50V

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SYMBOL NO.	PART NO.	PART DESCRIPTION
C4666	0800074	EL 470MF 16V
C4667	0800012	EL 4.7MF 50V
C4668	0890087	CD 1000PF +-10% 50V
C4669	0880048	PF 0.022MF +-10% 50V
C4670	0890076	CD 150PF +-10% 50V
C4671	0800058	EL 220MF 16V
C4672	0800058	EL 220MF 16V
C4673	0276717	PF 0.1MF +-5% 50V
C4674	0800058	EL 220MF 16V
C4675	0880044	PF 0.01MF +-10% 50V
C4676	0800058	EL 220MF 16V
C4677	0276717	PF 0.1MF +-5% 50V
C4678	0890119	CD 27PF +-5% 50V
C4679	0890119	CD 27PF +-5% 50V
C4680	0800103	EL 0.22MF 50V
C4681	0880055	PF 0.068MF +-10% 50V
C4682	0880038R	PF 3900PF +-10% 50V
C4683	0880039	PF 4700PF +-10% 50V
C4684	0880051	PF 0.033MF +-10% 50V
C4685	0284638	EL 10MF 16V
C4686	0800003	EL 1MF 50V
C4687	0284638	EL 10MF 16V
C4688	0284638	EL 10MF 16V
C4689	0284638	EL 10MF 16V
C4690	0880041	PF 5600PF +-10% 50V
C4691	0890084	CD 560PF +-10% 50V
C4692	0880042	PF 6800PF +-10% 50V
C4693	0284638	EL 10MF 16V
C4694	0284638	EL 10MF 16V
C4695	0276721	PF 0.22MF +-5% 50V
C4696	0284638	EL 10MF 16V
C4697	0890085	CD 680PF +-10% 50V
C4698	0800015	EL 10MF 16V
C4699	0284638	EL 10MF 16V
C4700	0800041	EL 47MF 16V
C4701	0800105	EL 0.33MF 50V
C4702	0880044	PF 0.01MF +-10% 50V
C4703	0800041	EL 47MF 16V
C4704	0800003	EL 1MF 50V
C4705	0800105	EL 0.33MF 50V
C4706	0880044	PF 0.01MF +-10% 50V
C4707	0284638	EL 10MF 16V
C4708	0800042	EL 47MF 25V
C4709	0800018	EL 10MF 50V
C4710	0800018	EL 10MF 50V
C4711	0800042	EL 47MF 25V
C4712	0800059	EL 220MF 25V
C4713	0800018	EL 10MF 50V
C4714	0252969	EL 2200MF 25V
C4715	0276717	PF 0.1MF +-5% 50V
C4716	0276717	PF 0.1MF +-5% 50V
C4717	0276717	PF 0.1MF +-5% 50V
C4718	0800083	EL 1000MF 25V
C4719	0800083	EL 1000MF 25V
C4722	0800042	EL 47MF 25V
C4726	0880044	PF 0.01MF +-10% 50V
C4727	0880044	PF 0.01MF +-10% 50V
C4728	0284638	EL 10MF 16V
C4729	0284638	EL 10MF 16V
C4731	0276721	PF 0.22MF +-5% 50V
C4732	0284623R	EL 1MF 50V
C4733	0284623R	EL 1MF 50V
C4734	0880031	PF 1000PF +-10% 50V
C4735	0880031	PF 1000PF +-10% 50V
C4736	0800003	EL 1MF 50V
C4739	0800015	EL 10MF 16V
C4740	880044	PF0.01MF +-10% 50V
C5503	0244171	CD 0.01MF +80-20% 50V
C5504	0246448	CD 22PF +-5% 50V
C5505	0800009	EL 4.7MF 25V
C5506	0800049	EL 100MF 16V
C5507	0244171	CD 0.01MF +80-20% 50V
C5508	0800049	EL 100MF 16V
C5510	0800049	EL 100MF 16V
C5511	0800003	EL 1MF 50V
C5512	0800003	EL 1MF 50V
C5513	0800003	EL 1MF 50V
C5514	0244171	CD 0.01MF +80-20% 50V
C5515	0244171	CD 0.01MF +80-20% 50V
C5516	0890116	CD 15PF +-5% 50V
C5517	0800001	EL 0.47MF 50V
C5518	0244171	CD 0.01MF +80-20% 50V
C5519	0244171	CD 0.01MF +80-20% 50V
C5520	0244171	CD 0.01MF +80-20% 50V
C5521	0244171	CD 0.01MF +80-20% 50V
C5522	0244171	CD 0.01MF +80-20% 50V
C5523	0244171	CD 0.01MF +80-20% 50V
C5524	0244171	CD 0.01MF +80-20% 50V
C5525	0800015	EL 10MF 16V
C5526	0244107	CD 3300PF +-10% 50V
C5527	0244171	CD 0.01MF +80-20% 50V
C5529	0800003	EL 1MF 50V
C5530	0890079R	CD 270PF +-10% 50V
C5531	0890087	CD 1000PF +-10% 50V
C5533	0880047	PF 0.018MF +-10% 50V
C5535	0800005	EL 2.2MF 50V
C5536	0800003	EL 1MF 50V
C5538	0800049	EL 100MF 16V
C5539	0244171	CD 0.01MF +80-20% 50V
C5540	0800003	EL 1MF 50V
C5545	0276717	PF 0.1MF +-5% 50V
C5546	0800049	EL 100MF 16V
C5547	0244171	CD 0.01MF +80-20% 50V
C5548	800058	EL 220MF 16V
C5901	0800049	EL 100MF 16V
C5902	0244171	CD 0.01MF +80-20% 50V

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SYMBOL NO.	PART NO.	PART DESCRIPTION
C5904	0800015	EL 10MF 16V
C5905	0284638	EL 10MF 16V
C5906	0890089	CD 1500PF +-10% 50V
C604	0800023	EL 22MF 16V
C605	0284647R	EL 22MF 16V
C606	0800003	EL 1MF 50V
C608	0284446R	EL 1MF 50V
C609	0284446R	EL 1MF 50V
C610	276721	PF 0.22MF +-5% 50V
C611	0800041	EL 47MF 16V
C612	0284647R	EL 22MF 16V
C613	0244109	CD 4700PF +-10% 50V
C620	0800003	EL 1MF 50V
C621	0284449R	EL 4.7MF 50V
C630	0800015	EL 10MF 16V
C631	276721	PF 0.22MF +-5% 50V
C632	0800015	EL 10MF 16V
C633	0800015	EL 10MF 16V
C651	0279859	PF 0.1MF +-10% 100V
C652	0880051	PF 0.033MF +-10% 50V
C653	0880044	PF 0.01MF +-10% 50V
C654	0800069	EL 330MF 50V
C655	0252969	EL 2200MF 25V
C656	0800069	EL 330MF 50V
C658	0800049	EL 100MF 16V
C659	0284446R	EL 1MF 50V
⚠C660	0298261R	TA 1MF +-10% 35V
C664	0800067	EL 330MF 25V
C665	0800015	EL 10MF 16V
C668	0880044	PF 0.01MF +-10% 50V
C669	0800043	EL 47MF 35V
C701	0880044	PF 0.01MF +-10% 50V
C711	0299926	PP 0.1MF +-10% 200V
C713	0244501	CD 1000PF +-10% 500V
C714	0243507	CD 330PF +-10% 500V
C715	0890028	CD 330PF +-10% 50V
⚠C716	0299929	PP 0.18MF +-10% 200V
⚠C717	0262426F	PP 9100PF +-5% 1.8KV
⚠C718	0262415F	PP 3600PF +-5% 1.8KV
⚠C719	0299929	PP 0.18MF +-10% 200V
⚠C720	0299929	PP 0.18MF +-10% 200V
⚠C721	0299918	PP 0.022MF +-10% 200V
C722	0259473	EL 6.8MF 25V
⚠C723	0244211F	CD 1000PF +-10% 2KV
C724	0259153	EL 220MF 160V
C726	0284634R	EL 4.7MF 50V
C727	0244504	CD 1800PF +-10% 500V
C729	0253983F	EL 33MF
C731	0800053	EL 100MF 50V
C732	0299636	PP 0.068MF +-5% 1600V
C738	0243510	CD 560PF +-10% 500V
C739	0800018	EL 10MF 50V
C743	0800003	EL 1MF 50V
C744	0880048	PF 0.022MF +-10% 50V
C745	0276717	PF 0.1MF +-5% 50V
C750	0890087	CD 1000PF +-10% 50V
C752	0890084	CD 560PF +-10% 50V
C753	0880051	PF 0.033MF +-10% 50V
C755	0244109	CD 4700PF +-10% 50V
C760	0243503	CD 150PF +-10% 500V
C763	0890089	CD 1500PF +-10% 50V
C770	0890082R	CD 390PF +-10% 50V
C771	0880044	PF 0.01MF +-10% 50V
C772	0800015	EL 10MF 16V
C773	0284642R	EL 10MF 50V
C775	0880041	PF 5600PF +-10% 50V
C776	0890083	CD 470PF +-10% 50V
C781	0800041	EL 47MF 16V
C790	0800074	EL 470MF 16V
C791	0800074	EL 470MF 16V
C792	284638	EL 10MF 16V
C793	0800015	EL 10MF 16V
C794	0244109	CD 4700PF +-10% 50V
C795	0284449R	EL 4.7MF 50V
C796	0800041	EL 47MF 16V
C797	0800049	EL 100MF 16V
C801G	0257543	EL 3.3MF 315V
C804B	0244889	CD 2200PF +-10% 2KV
C804G	0244889	CD 2200PF +-10% 2KV
C804R	0244889	CD 2200PF +-10% 2KV
C805B	0800326	EL 100MF 16V
C805G	0800326	EL 100MF 16V
C805R	0800326	EL 100MF 16V
C806B	0244501	CD 1000PF +-10% 500V
C807B	0244105	CD 2200PF +-10% 50V
C807G	0244105	CD 2200PF +-10% 50V
C807R	0244105	CD 2200PF +-10% 50V
C808B	0244120	CD 820PF +-10% 50V
C808G	0244102	CD 1200PF +-10% 50V
C808R	0244139	CD 1000PF +-10% 50V
C809B	0244227R	CD 100PF +-10% 50V
⚠C901	0279718	PF 0.1MF +-10% 125V
⚠C902	0279718	PF 0.1MF +-10% 125V
⚠C903	0248593F	CD 4700PF +80-20% 250V
⚠C904	0248593F	CD 4700PF +80-20% 250V
⚠C905	0248593F	CD 4700PF +80-20% 250V
⚠C906	0248593F	CD 4700PF +80-20% 250V
C907	0259167	EL 820MF 200V
C908	0259167	EL 820MF 200V
⚠C909	0249486	CD 2200PF +-20%
C911	0890087	CD 1000PF +-10% 50V
C912	0800067	EL 330MF 25V
C913	0880044	PF 0.01MF +-10% 50V
C914	0880035	PF 2200PF +-10% 50V
C915	0880044	PF 0.01MF +-10% 50V
C916	0299981	PP 0.01MF +-5% 630V

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SYMBOL NO.	PART NO.	PART DESCRIPTION
C917	0880031	PF 1000PF +-10% 50V
C918	0800009	EL 4.7MF 25V
⚠C920	0249487	CD 3300PF +-20%
C931	0800075	EL 470MF 25V
C932	0800015	EL 10MF 16V
C933	0800049	EL 100MF 16V
C941	0258175	EL 470MF 31.5V
C942	0880044	PF 0.01MF +-10% 50V
C943	0244105	CD 2200PF +-10% 50V
C944	0258178G	EL 470MF 63V
C945	0284439	EL 470MF 35V
C947	0800043	EL 47MF 35V
C948	0800043	EL 47MF 35V
C949	0258178G	EL 470MF 63V
C950	0284439F	EL 470MF 35V
C952	0276717	PF 0.1MF +-5% 50V
C953	0276717	PF 0.1MF +-5% 50V
C954	0800042	EL 47MF 25V
C956	0258175	EL 470MF 31.5V
C957	0258179G	EL 1000MF 6
C958	0258175	EL 470MF 31.5V
C959	0800044	EL 47MF 50V
C960	0276717	PF 0.1MF +-5% 50V
C981	0276717	PF 0.1MF +-5% 50V
C982	0800018	EL 10MF 50V
C983	0800044	EL 47MF 50V
C984	0258697	EL 470MF 160V
C985	0800041	EL 47MF 16V
C986	0800023	EL 22MF 16V
C987	0800003	EL 1MF 50V
C989	0800003	EL 1MF 50V
C990	0800082	EL 1000MF 16V
C991	0258121R	EL 2.2MF 100V
C992	0880044	PF 0.01MF +-10% 50V
C994	0800079	EL 1000MF 6.3V
		RESISTORS
RW01	0700067	CF 100K OHM +-5% 1/16W
RW02	0700059	CF 27K OHM +-5% 1/16W
RW04	0700035	CF 390 OHM +-5% 1/16W
RW06	0700036	CF 470 OHM +-5% 1/16W
RW07	0700059	CF 27K OHM +-5% 1/16W
RW08	0700067	CF 100K OHM +-5% 1/16W
RW09	0700033	CF 270 OHM +-5% 1/16W
RW10	0700033	CF 270 OHM +-5% 1/16W
RW11	0700042	CF 1.2K OHM +-5% 1/16W
RW12	0700045	CF 2.2K OHM +-5% 1/16W
RW13	0700058	CF 22K OHM +-5% 1/16W
RW16	0113742	CF 470 OHM +-5% 1/2W
RW17	0700046	CF 2.7K OHM +-5% 1/16W
RW19	0700025	CF 68 OHM +-5% 1/16W
RW20	0100065	CF 1K OHM +-5% 1/8W
RW21	0113701	CF 10 OHM +-5% 1/2W
RW22	0100039	CF 82 OHM +-5% 1/8W
RW23	0100039	CF 82 OHM +-5% 1/8W
RW24	0114165	CF 1.5K OHM +-5% 1/4W
RW25	0100069	CF 1.5K OHM +-5% 1/8W
RW26	0114143	CF 330 OHM +-5% 1/4W
RW27	0114221	CF 68K OHM +-5% 1/4W
RW28	0114221	CF 68K OHM +-5% 1/4W
RW29	0100053	CF 330 OHM +-5% 1/8W
RW30	0113776	CF 12K OHM +-5% 1/2W
RW31	0113716	CF 43 OHM +-5% 1/2W
RW32	0113716	CF 43 OHM +-5% 1/2W
RW33	0113686	CF 2.7 OHM +-5% 1/2W
RW34	0113686	CF 2.7 OHM +-5% 1/2W
RW35	0110229	CF 220 OHM +-5% 2W
RW36	0110135	CF 390 OHM +-5% 1W
RW37	0110132	CF 300 OHM +-5% 1W
RW38	0700049	CF 4.7K OHM +-5% 1/16W
RW39	0700054	CF 10K OHM +-5% 1/16W
RW40	0700061	CF 33K OHM +-5% 1/16W
RW41	0700036	CF 470 OHM +-5% 1/16W
RW42	0700037	CF 100K OHM +-5% 1/16W
RW43	0700054	CF 10K OHM +-5% 1/16W
RW44	0700042	CF 1.2K OHM +-5% 1/16W
RW45	0700067	CF 100K OHM +-5% 1/16W
R0001	0700041	CF 1K OHM +-5% 1/16W
R0002	0700041	CF 1K OHM +-5% 1/16W
R0003	0700058	CF 22K OHM +-5% 1/16W
R0004	0700041	CF 1K OHM +-5% 1/16W
R0005	0700041	CF 1K OHM +-5% 1/16W
R0006	0700049	CF 4.7K OHM +-5% 1/16W
R0008	0700055	CF 12K OHM +-5% 1/16W
R0009	0700055	CF 12K OHM +-5% 1/16W
R0010	0700055	CF 12K OHM +-5% 1/16W
R0011	0700056	CF 15K OHM +-5% 1/16W
R0012	0700056	CF 15K OHM +-5% 1/16W
R0013	0700056	CF 15K OHM +-5% 1/16W
R0015	0700051	CF 5.6K OHM +-5% 1/16W
R0016	0700051	CF 5.6K OHM +-5% 1/16W
R0017	0700049	CF 4.7K OHM +-5% 1/16W
R0018	0700053	CF 8.2K OHM +-5% 1/16W
R0019	0700055	CF 12K OHM +-5% 1/16W
R0020	0700053	CF 8.2K OHM +-5% 1/16W
R0021	0700053	CF 8.2K OHM +-5% 1/16W
R0031	0700041	CF 1K OHM +-5% 1/16W
R0032	0700067	CF 100K OHM +-5% 1/16W
R0033	0700027	CF 100 OHM +-5% 1/16W
R0034	0700041	CF 1K OHM +-5% 1/16W
R0035	0700067	CF 100K OHM +-5% 1/16W
R0036	0700041	CF 1K OHM +-5% 1/16W
R0037	0700067	CF 100K OHM +-5% 1/16W
R0038	0700041	CF 1K OHM +-5% 1/16W
R0039	700052	CF 6.8K OHM +-5% 1/16W

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SYMBOL NO.	PART NO.	PART DESCRIPTION
R0040	0700067	CF 100K OHM +-5% 1/16W
R0041	0700041	CF 1K OHM +-5% 1/16W
R0042	0700067	CF 100K OHM +-5% 1/16W
R0043	0700041	CF 1K OHM +-5% 1/16W
R0044	0700067	CF 100K OHM +-5% 1/16W
R0045	0700041	CF 1K OHM +-5% 1/16W
R0046	0700067	CF 100K OHM +-5% 1/16W
R0047	0700041	CF 1K OHM +-5% 1/16W
R0048	0700067	CF 100K OHM +-5% 1/16W
R0049	0700041	CF 1K OHM +-5% 1/16W
R0050	0700067	CF 100K OHM +-5% 1/16W
R0051	0700041	CF 1K OHM +-5% 1/16W
R0052	0700067	CF 100K OHM +-5% 1/16W
R0053	0700041	CF 1K OHM +-5% 1/16W
R0054	0700049	CF 4.7K OHM +-5% 1/16W
R0055	0700045	CF 2.2K OHM +-5% 1/16W
R0056	0700051	CF 5.6K OHM +-5% 1/16W
R0057	0700064	CF 56K OHM +-5% 1/16W
R0059	0700049	CF 4.7K OHM +-5% 1/16W
R0060	0700049	CF 4.7K OHM +-5% 1/16W
R0061	0700058	CF 22K OHM +-5% 1/16W
R0062	0700067	CF 100K OHM +-5% 1/16W
R0063	0700031	CF 180 OHM +-5% 1/16W
R0064	0700066	CF 82K OHM +-5% 1/16W
R0065	700064	CF 56K OHM +-5% 1/16W
R0067	700066	CF 82K OHM +-5% 1/16W
R0068	700063	CF 47K OHM +-5% 1/16W
R0069	0700054	CF 10K OHM +-5% 1/16W
R0070	0700041	CF 1K OHM +-5% 1/16W
R0071	0700058	CF 22K OHM +-5% 1/16W
R0073	0700041	CF 1K OHM +-5% 1/16W
R0074	0700067	CF 100K OHM +-5% 1/16W
R0075	0700041	CF 1K OHM +-5% 1/16W
R0076	0700067	CF 100K OHM +-5% 1/16W
R0077	0700041	CF 1K OHM +-5% 1/16W
R0078	0700067	CF 100K OHM +-5% 1/16W
R0079	0700041	CF 1K OHM +-5% 1/16W
R0080	0700041	CF 1K OHM +-5% 1/16W
R0081	0700041	CF 1K OHM +-5% 1/16W
R0082	0700041	CF 1K OHM +-5% 1/16W
R0083	0700041	CF 1K OHM +-5% 1/16W
R0084	0700041	CF 1K OHM +-5% 1/16W
R0085	0700041	CF 1K OHM +-5% 1/16W
R0086	0700041	CF 1K OHM +-5% 1/16W
R0087	0700041	CF 1K OHM +-5% 1/16W
R0088	0700041	CF 1K OHM +-5% 1/16W
R0089	0700041	CF 1K OHM +-5% 1/16W
R0090	0700041	CF 1K OHM +-5% 1/16W
R0091	0700041	CF 1K OHM +-5% 1/16W
R0092	0700041	CF 1K OHM +-5% 1/16W
R0093	0700041	CF 1K OHM +-5% 1/16W
R0094	0700041	CF 1K OHM +-5% 1/16W
R0095	0700041	CF 1K OHM +-5% 1/16W
R0096	0700049	CF 4.7K OHM +-5% 1/16W
R0097	0700058	CF 22K OHM +-5% 1/16W
R0098	0700041	CF 1K OHM +-5% 1/16W
R0099	0700041	CF 1K OHM +-5% 1/16W
R0100	0700045	CF 2.2K OHM +-5% 1/16W
R0101	0700041	CF 1K OHM +-5% 1/16W
R0102	0700058	CF 22K OHM +-5% 1/16W
R0103	0700041	CF 1K OHM +-5% 1/16W
R0104	0700041	CF 1K OHM +-5% 1/16W
R0105	0700041	CF 1K OHM +-5% 1/16W
R0106	0700041	CF 1K OHM +-5% 1/16W
R0107	0700051	CF 5.6K OHM +-5% 1/16W
R0108	0700041	CF 1K OHM +-5% 1/16W
R0109	0700051	CF 5.6K OHM +-5% 1/16W
R0110	0700041	CF 1K OHM +-5% 1/16W
R0111	0700041	CF 1K OHM +-5% 1/16W
R0112	0700041	CF 1K OHM +-5% 1/16W
R0113	0700041	CF 1K OHM +-5% 1/16W
R0114	700058	CF 22K OHM +-5% 1/16W
R0115	700058	CF 22K OHM +-5% 1/16W
R0116	0700041	CF 1K OHM +-5% 1/16W
R0117	0700041	CF 1K OHM +-5% 1/16W
R0118	0700041	CF 1K OHM +-5% 1/16W
R0120	700027	CF 100 OHM +-5% 1/16W
R0121	700027	CF 100 OHM +-5% 1/16W
R0122	0700041	CF 1K OHM +-5% 1/16W
R0123	0700041	CF 1K OHM +-5% 1/16W
R0124	0700041	CF 1K OHM +-5% 1/16W
R0125	0700041	CF 1K OHM +-5% 1/16W
R0126	0700065	CF 68K OHM +-5% 1/16W
R0127	0119635	MF 15K OHM +-1% 1/8W
R0128	0700034	CF 330 OHM +-5% 1/16W
R0129	0700037	CF 560 OHM +-5% 1/16W
R0130	0700057	CF 18K OHM +-5% 1/16W
R0131	0700027	CF 100 OHM +-5% 1/16W
R0132	0700022	CF 39 OHM +-5% 1/16W
R0133	0100065	CF 1K OHM +-5% 1/8W
R0136	0700064	CF 56K OHM +-5% 1/16W
R0137	0700041	CF 1K OHM +-5% 1/16W
R0138	0700041	CF 1K OHM +-5% 1/16W
R0139	0700041	CF 1K OHM +-5% 1/16W
R0140	0700041	CF 1K OHM +-5% 1/16W
R0141	0700054	CF 10K OHM +-5% 1/16W
R0146	0100053	CF 330 OHM +-5% 1/8W
R0151	0100067	CF 1.2K OHM +-5% 1/8W
R0152	0700041	CF 1K OHM +-5% 1/16W
R0153	0700041	CF 1K OHM +-5% 1/16W
R0154	0700041	CF 1K OHM +-5% 1/16W
R0155	0700041	CF 1K OHM +-5% 1/16W
R0159	0700041	CF 1K OHM +-5% 1/16W
R0161	0700056	CF 15K OHM +-5% 1/16W
R0162	0700051	CF 5.6K OHM +-5% 1/16W
R0163	0700056	CF 15K OHM +-5% 1/16W

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R0164	0700054	CF 10K OHM +-5% 1/16W	R0251	100049	CF 220 OHM +-5% 1/8W
R0165	0700061	CF 33K OHM +-5% 1/16W	R0501	0700041	CF 1K OHM +-5% 1/16W
R0166	0700066	CF 82K OHM +-5% 1/16W	R0502	0700058	CF 22K OHM +-5% 1/16W
R0167	0700054	CF 10K OHM +-5% 1/16W	R0503	0700045	CF 2.2K OHM +-5% 1/16W
R0168	0100065	CF 1K OHM +-5% 1/8W	R0504	0100065	CF 1K OHM +-5% 1/8W
R0169	0700064	CF 56K OHM +-5% 1/16W	R0510	0100125	CF 330K OHM +-5% 1/8W
R0170	0100097	CF 22K OHM +-5% 1/8W	R0511	0700041	CF 1K OHM +-5% 1/16W
R0171	0100056	CF 1.1K OHM +-5% 1/8W	R0512	0100125	CF 330K OHM +-5% 1/8W
R0172	0100041	CF 100 OHM +-5% 1/8W	R0513	0100129	CF 470K OHM +-5% 1/8W
R0173	0100065	CF 1K OHM +-5% 1/8W	R0516	0700041	CF 1K OHM +-5% 1/16W
R0174	0100065	CF 1K OHM +-5% 1/8W	R0517	0700043	CF 1.5K OHM +-5% 1/16W
R0176	0100065	CF 1K OHM +-5% 1/8W	R0518	0187074	CF 2.4K OHM +-5% 1/16W
R0177	0700054	CF 10K OHM +-5% 1/16W	R0519	0187080	CF 4.3K OHM +-5% 1/16W
R0178	0700065	CF 68K OHM +-5% 1/16W	R0520	0100065	CF 1K OHM +-5% 1/8W
R0179	0700054	CF 10K OHM +-5% 1/16W	R0521	0114149	CF 560 OHM +-5% 1/4W
R0180	0100065	CF 1K OHM +-5% 1/8W	R0530	0100115	CF 120K OHM +-5% 1/8W
R0182	0700022	CF 39 OHM +-5% 1/16W	R0531	0700046	CF 2.7K OHM +-5% 1/16W
R0186	0700051	CF 5.6K OHM +-5% 1/16W	R0532	0700052	CF 6.8K OHM +-5% 1/16W
R0187	0700041	CF 1K OHM +-5% 1/16W	R0533	0700046	CF 2.7K OHM +-5% 1/16W
R0188	0150287	VR 10K OHM-B	R0534	0700048	CF 3.9K OHM +-5% 1/16W
R0189	0700054	CF 10K OHM +-5% 1/16W	R0535	0159922	VR 5K OHM-B
R0190	0700054	CF 10K OHM +-5% 1/16W	R0536	0700057	CF 18K OHM +-5% 1/16W
R0191	0700054	CF 10K OHM +-5% 1/16W	R0537	0100121	CF 220K OHM +-5% 1/8W
R0192	0700054	CF 10K OHM +-5% 1/16W	R0538	0700061	CF 33K OHM +-5% 1/16W
R0193	0700054	CF 10K OHM +-5% 1/16W	R0539	0700041	CF 1K OHM +-5% 1/16W
R0194	0700054	CF 10K OHM +-5% 1/16W	R0968	0700054	CF 10K OHM +-5% 1/16W
R0195	0700054	CF 10K OHM +-5% 1/16W	R1101	0700063	CF 47K OHM +-5% 1/16W
R0196	0700058	CF 22K OHM +-5% 1/16W	R1102	0700054	CF 10K OHM +-5% 1/16W
R0197	0700058	CF 22K OHM +-5% 1/16W	R1103	0700058	CF 22K OHM +-5% 1/16W
R0198	0700058	CF 22K OHM +-5% 1/16W	R1104	0700041	CF 1K OHM +-5% 1/16W
R0199	0700058	CF 22K OHM +-5% 1/16W	R1301	0700063	CF 47K OHM +-5% 1/16W
R0200	0700041	CF 1K OHM +-5% 1/16W	R1302	0110229	MF 220 OHM +-5% 2W
R0202	0700066	CF 82K OHM +-5% 1/16W	R1303	0113696	CF 6.8 OHM +-5% 1/2W
R0203	0187064	CF 910 OHM +-5% 1/16W	R1304	0113696	CF 6.8 OHM +-5% 1/2W
R0204	0700061	CF 33K OHM +-5% 1/16W	R1306	0100077	CF 3.3K OHM +-5% 1/8W
R0205	0700061	CF 33K OHM +-5% 1/16W	R1311	0700063	CF 47K OHM +-5% 1/16W
R0206	0700061	CF 33K OHM +-5% 1/16W	R1312	0110225	MF 150 OHM +-5% 2W
R0207	0700063	CF 47K OHM +-5% 1/16W	R1313	0113692	CF 4.7 OHM +-5% 1/2W
R0208	0700063	CF 47K OHM +-5% 1/16W	R1314	0113692	CF 4.7 OHM +-5% 1/2W
R0209	0700063	CF 47K OHM +-5% 1/16W	R1316	0100077	CF 3.3K OHM +-5% 1/8W
R0211	0700058	CF 22K OHM +-5% 1/16W	R1326	0700063	CF 47K OHM +-5% 1/16W
R0212	0700058	CF 22K OHM +-5% 1/16W	R1327	0110229	MF 220 OHM +-5% 2W
R0213	0700049	CF 4.7K OHM +-5% 1/16W	R1328	0113696	CF 6.8 OHM +-5% 1/2W
R0214	0114149	CF 560 OHM +-5% 1/4W	R1329	0113696	CF 6.8 OHM +-5% 1/2W
R0215	0700058	CF 22K OHM +-5% 1/16W	R1331	0100077	CF 3.3K OHM +-5% 1/8W
R0216	0700054	CF 10K OHM +-5% 1/16W	R1336	0700063	CF 47K OHM +-5% 1/16W
R0220	0700055	CF 12K OHM +-5% 1/16W	R1337	0110225	MF 150 OHM +-5% 2W
R0223	0700041	CF 1K OHM +-5% 1/16W	R1338	0113698	CF 8.2 OHM +-5% 1/2W
R0225	0700054	CF 10K OHM +-5% 1/16W	R1339	0113698	CF 8.2 OHM +-5% 1/2W
R0226	0100121	CF 220K OHM +-5% 1/8W	R1341	0100077	CF 3.3K OHM +-5% 1/8W
R0229	0100121	CF 220K OHM +-5% 1/8W	R1351	0700063	CF 47K OHM +-5% 1/16W
R0233	700041	CF 1K OHM +-5% 1/2W	R1352	0110229	MF 220 OHM +-5% 2W
R0250	113725	CF 100 OHM +-5% 1/8W	R1353	0113696	CF 6.8 OHM +-5% 1/2W

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R1354	0113696	CF 6.8 OHM +-5% 1/2W	R2111	0150136	VR 5K OHM-B
R1356	0100077	CF 3.3K OHM +-5% 1/8W	R2112	0150136	VR 5K OHM-B
R1361	0700063	CF 47K OHM +-5% 1/16W	R2113	0150136	VR 5K OHM-B
R1362	0110225	MF 150 OHM +-5% 2W	R2114	0150136	VR 5K OHM-B
R1363	0113692	CF 4.7 OHM +-5% 1/2W	R2115	0150136	VR 5K OHM-B
R1364	0113692	CF 4.7 OHM +-5% 1/2W	R2116	0150136	VR 5K OHM-B
R1366	0100077	CF 3.3K OHM +-5% 1/8W	R2117	0150136	VR 5K OHM-B
R1370	0700032	CF 220 OHM +-5% 1/16W	R2118	0150136	VR 5K OHM-B
R1371	0700032	CF 220 OHM +-5% 1/16W	R2119	0150136	VR 5K OHM-B
R1372	0700032	CF 220 OHM +-5% 1/16W	R2120	0150136	VR 5K OHM-B
R1373	0700032	CF 220 OHM +-5% 1/16W	R2121	0150136	VR 5K OHM-B
R1374	0700032	CF 220 OHM +-5% 1/16W	R2122	0150136	VR 5K OHM-B
R1375	0700032	CF 220 OHM +-5% 1/16W	R2123	0150136	VR 5K OHM-B
R1376	0700032	CF 220 OHM +-5% 1/16W	R2124	0150136	VR 5K OHM-B
R1377	0700032	CF 220 OHM +-5% 1/16W	R2125	0150136	VR 5K OHM-B
R1378	0700032	CF 220 OHM +-5% 1/16W	R2126	0150136	VR 5K OHM-B
R1379	0700032	CF 220 OHM +-5% 1/16W	R2127	0150136	VR 5K OHM-B
R1501	0700044	CF 1.8K OHM +-5% 1/16W	R2128	0150136	VR 5K OHM-B
R1503	0700041	CF 1K OHM +-5% 1/16W	R2129	0150136	VR 5K OHM-B
R1504	0700054	CF 10K OHM +-5% 1/16W	R2130	0150136	VR 5K OHM-B
R1505	0700041	CF 1K OHM +-5% 1/16W	R2131	0150136	VR 5K OHM-B
R1507	0700041	CF 1K OHM +-5% 1/16W	R2132	0150136	VR 5K OHM-B
R1508	0700051	CF 5.6K OHM +-5% 1/16W	R2133	0150136	VR 5K OHM-B
R1509	0700048	CF 3.9K OHM +-5% 1/16W	R2134	0150136	VR 5K OHM-B
R1510	0700051	CF 5.6K OHM +-5% 1/16W	R2135	0150136	VR 5K OHM-B
R1511	0700049	CF 4.7K OHM +-5% 1/16W	R2136	0150136	VR 5K OHM-B
R1512	0700051	CF 5.6K OHM +-5% 1/16W	R2137	0150136	VR 5K OHM-B
R1513	0700049	CF 4.7K OHM +-5% 1/16W	R2138	0150136	VR 5K OHM-B
R1514	0700051	CF 5.6K OHM +-5% 1/16W	R2139	0150136	VR 5K OHM-B
R1515	0700051	CF 5.6K OHM +-5% 1/16W	R2140	0150136	VR 5K OHM-B
R1516	0700057	CF 18K OHM +-5% 1/16W	R2141	0150136	VR 5K OHM-B
R1517	0700046	CF 2.7K OHM +-5% 1/16W	R2142	0150136	VR 5K OHM-B
R1518	0700062	CF 39K OHM +-5% 1/16W	R2151	0700044	CF 1.8K OHM +-5% 1/16W
R1519	0700057	CF 18K OHM +-5% 1/16W	R2152	0700042	CF 1.2K OHM +-5% 1/16W
R1520	0700046	CF 2.7K OHM +-5% 1/16W	R2153	0700042	CF 1.2K OHM +-5% 1/16W
R1521	0700062	CF 39K OHM +-5% 1/16W	R2154	0187092	CF 13K OHM+-5% 1/16W
R1522	0700057	CF 18K OHM +-5% 1/16W	R2155	0700049	CF 4.7K OHM +-5% 1/16W
R1523	0700049	CF 4.7K OHM +-5% 1/16W	R2156	0700047	CF 3.3K OHM +-5% 1/16W
R1524	0700062	CF 39K OHM +-5% 1/16W	R2157	0700052	CF 6.8K OHM +-5% 1/16W
R1525	0700057	CF 18K OHM +-5% 1/16W	R2158	0700054	CF 10K OHM +-5% 1/16W
R1526	0700049	CF 4.7K OHM +-5% 1/16W	R2162	0700054	CF 10K OHM +-5% 1/16W
R1527	0700062	CF 39K OHM +-5% 1/16W	R2163	0100121	CF 220K OHM +-5% 1/8W
R1528	0700054	CF 10K OHM +-5% 1/16W	R2164	0114161	CF 1K OHM +-5% 1/4W
R2101	0150136	VR 5K OHM-B	R2165	0100087	CF 8.2K OHM +-5% 1/8W
R2102	0150136	VR 5K OHM-B	R2166	0187072	CF 2K OHM +-5% 1/16W
R2103	0150136	VR 5K OHM-B	R2167	0700049	CF 4.7K OHM +-5% 1/16W
R2104	0150136	VR 5K OHM-B	R2168	0187068	CF 1.3K OHM +-5% 1/16W
R2105	0150136	VR 5K OHM-B	R2169	0187080	CF 4.3K OHM +-5% 1/16W
R2106	0150136	VR 5K OHM-B	R2170	0700055	CF 12K OHM +-5% 1/16W
R2107	0150136	VR 5K OHM-B	R2171	0700047	CF 3.3K OHM +-5% 1/16W
R2108	0150136	VR 5K OHM-B	R2172	0700047	CF 3.3K OHM +-5% 1/16W
R2109	0150136	VR 5K OHM-B	R2173	0700067	CF 100K OHM +-5% 1/16W
R2110	0150136	VR 5K OHM-B	R2174	0700049	CF 4.7K OHM +-5% 1/16W

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R2175	0700042	CF 1.2K OHM +-5% 1/16W	R2245	0700049	CF 4.7K OHM +-5% 1/16W
R2177	0700047	CF 3.3K OHM +-5% 1/16W	R2246	0700046	CF 2.7K OHM +-5% 1/16W
R2178	0700055	CF 12K OHM +-5% 1/16W	R2247	0700063	CF 47K OHM +-5% 1/16W
R2179	0700047	CF 3.3K OHM +-5% 1/16W	R2250	0700067	CF 100K OHM +-5% 1/16W
R2180	0700066	CF 82K OHM +-5% 1/16W	R2251	0700058	CF 22K OHM +-5% 1/16W
R2182	0700051	CF 5.6K OHM +-5% 1/16W	R2252	0700061	CF 33K OHM +-5% 1/16W
R2183	0150134	VR 1K OHM-B	R2253	0700042	CF 1.2K OHM +-5% 1/16W
R2189	0700055	CF 12K OHM +-5% 1/16W	R2254	0700049	CF 4.7K OHM +-5% 1/16W
R2190	0700057	CF 18K OHM +-5% 1/16W	R2255	0700051	CF 5.6K OHM +-5% 1/16W
R2193	0150136	VR 5K OHM-B	R2256	0700042	CF 1.2K OHM +-5% 1/16W
R2194	0150136	VR 5K OHM-B	R2257	0700046	CF 2.7K OHM +-5% 1/16W
R2195	0150136	VR 5K OHM-B	R2258	0700052	CF 6.8K OHM +-5% 1/16W
R2196	0150136	VR 5K OHM-B	R2259	0700045	CF 2.2K OHM +-5% 1/16W
R2197	0700066	CF 82K OHM +-5% 1/16W	R2260	0700042	CF 1.2K OHM +-5% 1/16W
R2199	0187104	CF 43K OHM +-5% 1/16W	R2261	0700047	CF 3.3K OHM +-5% 1/16W
R2200	0700054	CF 10K OHM +-5% 1/16W	R2262	0700047	CF 3.3K OHM +-5% 1/16W
R2201	0700052	CF 6.8K OHM +-5% 1/16W	R2263	0700054	CF 10K OHM +-5% 1/16W
R2205	0700067	CF 100K OHM +-5% 1/16W	R2264	0700047	CF 3.3K OHM +-5% 1/16W
R2206	0187098	CF 24K OHM +-5% 1/16W	R2265	0700058	CF 22K OHM +-5% 1/16W
R2208	0700049	CF 4.7K OHM +-5% 1/16W	R2266	0700046	CF 2.7K OHM +-5% 1/16W
R2209	0700049	CF 4.7K OHM +-5% 1/16W	R2267	0700053	CF 8.2K OHM +-5% 1/16W
R2210	0700047	CF 3.3K OHM +-5% 1/16W	R2268	0700054	CF 10K OHM +-5% 1/16W
R2211	0700054	CF 10K OHM +-5% 1/16W	R2269	0700054	CF 10K OHM +-5% 1/16W
R2212	0700048	CF 3.9K OHM +-5% 1/16W	R2270	0700047	CF 3.3K OHM +-5% 1/16W
R2213	0700041	CF 1K OHM +-5% 1/16W	R2271	0700048	CF 3.9K OHM +-5% 1/16W
R2217	0700049	CF 4.7K OHM +-5% 1/16W	R2272	0700063	CF 47K OHM +-5% 1/16W
R2218	0700044	CF 1.8K OHM +-5% 1/16W	R2273	0700067	CF 100K OHM +-5% 1/16W
R2219	0700067	CF 100K OHM +-5% 1/16W	R2274	0700062	CF 39K OHM +-5% 1/16W
R2220	0114161	CF 1K OHM +-5% 1/4W	R2275	0700048	CF 3.9K OHM +-5% 1/16W
R2221	0700049	CF 4.7K OHM +-5% 1/16W	R2276	0700051	CF 5.6K OHM +-5% 1/16W
R2222	0700052	CF 6.8K OHM +-5% 1/16W	R2277	0700048	CF 3.9K OHM +-5% 1/16W
R2223	0700048	CF 3.9K OHM +-5% 1/16W	R2278	0700045	CF 2.2K OHM +-5% 1/16W
R2224	0700048	CF 3.9K OHM +-5% 1/16W	R2279	0700041	CF 1K OHM +-5% 1/16W
R2225	0187086	CF 7.5K OHM +-5% 1/16W	R2280	0700054	CF 10K OHM +-5% 1/16W
R2226	0700048	CF 3.9K OHM +-5% 1/16W	R2281	0700054	CF 10K OHM +-5% 1/16W
R2227	0700051	CF 5.6K OHM +-5% 1/16W	R2282	0700046	CF 2.7K OHM +-5% 1/16W
R2228	0700045	CF 2.2K OHM +-5% 1/16W	R2283	0700049	CF 4.7K OHM +-5% 1/16W
R2229	0700045	CF 2.2K OHM +-5% 1/16W	R2284	0700052	CF 6.8K OHM +-5% 1/16W
R2230	0700053	CF 8.2K OHM +-5% 1/16W	R2285	0700045	CF 2.2K OHM +-5% 1/16W
R2231	0700041	CF 1K OHM +-5% 1/16W	R2286	0700052	CF 6.8K OHM +-5% 1/16W
R2232	0700054	CF 10K OHM +-5% 1/16W	R2287	0700066	CF 82K OHM +-5% 1/16W
R2233	0700044	CF 1.8K OHM +-5% 1/16W	R2288	0700045	CF 2.2K OHM +-5% 1/16W
R2234	0700045	CF 2.2K OHM +-5% 1/16W	R2289	0700052	CF 6.8K OHM +-5% 1/16W
R2235	0700054	CF 10K OHM +-5% 1/16W	R2290	0700054	CF 10K OHM +-5% 1/16W
R2236	0700049	CF 4.7K OHM +-5% 1/16W	R2291	0700027	CF 100 OHM +-5% 1/16W
R2237	0700045	CF 2.2K OHM +-5% 1/16W	R2292	0700047	CF 3.3K OHM +-5% 1/16W
R2238	0700066	CF 82K OHM +-5% 1/16W	R2293	0700046	CF 2.7K OHM +-5% 1/16W
R2239	0700048	CF 3.9K OHM +-5% 1/16W	R2294	0700049	CF 4.7K OHM +-5% 1/16W
R2240	0700054	CF 10K OHM +-5% 1/16W	R2295	0700063	CF 47K OHM +-5% 1/16W
R2241	0700054	CF 10K OHM +-5% 1/16W	R2298	0700042	CF 1.2K OHM +-5% 1/16W
R2242	0700061	CF 33K OHM +-5% 1/16W	R2299	0700049	CF 4.7K OHM +-5% 1/16W
R2243	0700041	CF 1K OHM +-5% 1/16W	R2300	0700051	CF 5.6K OHM +-5% 1/16W
R2244	0700047	CF 3.3K OHM +-5% 1/16W	R2301	0700042	CF 1.2K OHM +-5% 1/16W

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SYMBOL NO.	PART NO.	PART DESCRIPTION	SYMBOL NO.	PART NO.	PART DESCRIPTION
R2302	0700046	CF 2.7K OHM +-5% 1/16W	R2358	0700041	CF 1K OHM +-5% 1/16W
R2303	0700052	CF 6.8K OHM +-5% 1/16W	R2359	0700049	CF 4.7K OHM +-5% 1/16W
R2304	0700045	CF 2.2K OHM +-5% 1/16W	R2361	0700067	CF 100K OHM +-5% 1/16W
R2305	0700048	CF 3.9K OHM +-5% 1/16W	R2362	0700055	CF 12K OHM +-5% 1/16W
R2306	0700049	CF 4.7K OHM +-5% 1/16W	R2363	0700041	CF 1K OHM +-5% 1/16W
R2307	0700067	CF 100K OHM +-5% 1/16W	R2364	0700049	CF 4.7K OHM +-5% 1/16W
R2308	0700049	CF 4.7K OHM +-5% 1/16W	R2365	0700059	CF 27K OHM +-5% 1/16W
R2309	0700044	CF 1.8K OHM +-5% 1/16W	R2366	0700041	CF 1K OHM +-5% 1/16W
R2310	0700052	CF 6.8K OHM +-5% 1/16W	R2367	0700049	CF 4.7K OHM +-5% 1/16W
R2311	0700058	CF 22K OHM +-5% 1/16W	R2368	0700041	CF 1K OHM +-5% 1/16W
R2312	0700061	CF 33K OHM +-5% 1/16W	R2369	0700054	CF 10K OHM +-5% 1/16W
R2313	0700046	CF 2.7K OHM +-5% 1/16W	R2370	0700047	CF 3.3K OHM +-5% 1/16W
R2314	0700052	CF 6.8K OHM +-5% 1/16W	R2371	0700048	CF 3.9K OHM +-5% 1/16W
R2315	0700054	CF 10K OHM +-5% 1/16W	R2372	0150134	VR 1K OHM-B
R2316	0700047	CF 3.3K OHM +-5% 1/16W	R2373	0700047	CF 3.3K OHM +-5% 1/16W
R2317	0700047	CF 3.3K OHM +-5% 1/16W	R2374	0700059	CF 27K OHM +-5% 1/16W
R2318	0700049	CF 4.7K OHM +-5% 1/16W	R2375	0700047	CF 3.3K OHM +-5% 1/16W
R2319	0700053	CF 8.2K OHM +-5% 1/16W	R2376	0700055	CF 12K OHM +-5% 1/16W
R2320	0700058	CF 22K OHM +-5% 1/16W	R2377	0700064	CF 56K OHM +-5% 1/16W
R2321	0700062	CF 39K OHM +-5% 1/16W	R2378	0700065	CF 68K OHM +-5% 1/16W
R2322	0700067	CF 100K OHM +-5% 1/16W	R2379	0700041	CF 1K OHM +-5% 1/16W
R2323	0700063	CF 47K OHM +-5% 1/16W	R2380	0700049	CF 4.7K OHM +-5% 1/16W
R2324	0700041	CF 1K OHM +-5% 1/16W	R2381	0700041	CF 1K OHM +-5% 1/16W
R2325	0700052	CF 6.8K OHM +-5% 1/16W	R2383	0700041	CF 1K OHM +-5% 1/16W
R2326	0700045	CF 2.2K OHM +-5% 1/16W	R2384	0700049	CF 4.7K OHM +-5% 1/16W
R2327	0700051	CF 5.6K OHM +-5% 1/16W	R2388	0700041	CF 1K OHM +-5% 1/16W
R2328	0700049	CF 4.7K OHM +-5% 1/16W	R2389	0700041	CF 1K OHM +-5% 1/16W
R2329	0700046	CF 2.7K OHM +-5% 1/16W	R2390	0700052	CF 6.8K OHM +-5% 1/16W
R2330	0700042	CF 1.2K OHM +-5% 1/16W	R2391	0700062	CF 39K OHM +-5% 1/16W
R2331	0700045	CF 2.2K OHM +-5% 1/16W	R2392	0700041	CF 1K OHM +-5% 1/16W
R2332	0700053	CF 8.2K OHM +-5% 1/16W	R2393	0700042	CF 1.2K OHM +-5% 1/16W
R2333	0700041	CF 1K OHM +-5% 1/16W	R2394	0700053	CF 8.2K OHM +-5% 1/16W
R2334	0700049	CF 4.7K OHM +-5% 1/16W	R2396	0700041	CF 1K OHM +-5% 1/16W
R2335	0700049	CF 4.7K OHM +-5% 1/16W	R2397	0700054	CF 10K OHM +-5% 1/16W
R2336	0700066	CF 82K OHM +-5% 1/16W	R2398	0700054	CF 10K OHM +-5% 1/16W
R2337	0187086	CF 7.5K OHM +-5% 1/16W	R2399	0700043	CF 1.5K OHM +-5% 1/16W
R2338	0700053	CF 8.2K OHM +-5% 1/16W	R2400	0700049	CF 4.7K OHM +-5% 1/16W
R2339	0700054	CF 10K OHM +-5% 1/16W	R2401	0700041	CF 1K OHM +-5% 1/16W
R2340	0700046	CF 2.7K OHM +-5% 1/16W	R2402	0700041	CF 1K OHM +-5% 1/16W
R2341	0700052	CF 6.8K OHM +-5% 1/16W	R2403	0700066	CF 82K OHM +-5% 1/16W
R2342	0700032	CF 220 OHM +-5% 1/16W	R2404	0700056	CF 15K OHM +-5% 1/16W
R2343	0700032	CF 220 OHM +-5% 1/16W	R2405	0700054	CF 10K OHM +-5% 1/16W
R2344	0700032	CF 220 OHM +-5% 1/16W	R2406	0700047	CF 3.3K OHM +-5% 1/16W
R2345	0700032	CF 220 OHM +-5% 1/16W	R2407	0700047	CF 3.3K OHM +-5% 1/16W
R2346	0700032	CF 220 OHM +-5% 1/16W	R2408	0700041	CF 1K OHM +-5% 1/16W
R2347	0700032	CF 220 OHM +-5% 1/16W	R2409	0700041	CF 1K OHM +-5% 1/16W
R2348	0700067	CF 100K OHM +-5% 1/16W	R2410	0700066	CF 82K OHM +-5% 1/16W
R2349	0700051	CF 5.6K OHM +-5% 1/16W	R2411	0700056	CF 15K OHM +-5% 1/16W
R2350	0700054	CF 10K OHM +-5% 1/16W	R2419	0700061	CF 33K OHM +-5% 1/16W
R2352	0700048	CF 3.9K OHM +-5% 1/16W	R2420	0700054	CF 10K OHM +-5% 1/16W
R2353	0700049	CF 4.7K OHM +-5% 1/16W	R2421	0700054	CF 10K OHM +-5% 1/16W
R2355	0700053	CF 8.2K OHM +-5% 1/16W	R2422	0700055	CF 12K OHM +-5% 1/16W
R2356	0700041	CF 1K OHM +-5% 1/16W	R2423	0700053	CF 8.2K OHM +-5% 1/16W

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SYMBOL NO.	PART NO.	PART DESCRIPTION
R2424	0187110	CF 75K OHM +-5% 1/16W
R2425	0700038	CF 680 OHM +-5% 1/16W
R2426	0700061	CF 33K OHM +-5% 1/16W
R2427	0700049	CF 4.7K OHM +-5% 1/16W
R2428	0700053	CF 8.2K OHM +-5% 1/16W
R2429	0114177	CF 4.7K OHM +-5% 1/4W
R2430	0100075	CF 2.7K OHM +-5% 1/8W
R2441	0100124	CF 300K OHM +-5% 1/8W
R2443	0700059	CF 27K OHM +-5% 1/16W
R2445	0700052	CF 6.8K OHM +-5% 1/16W
R2446	0700054	CF 10K OHM +-5% 1/16W
R2447	0700067	CF 100K OHM +-5% 1/16W
R2448	0700064	CF 56K OHM +-5% 1/16W
R2449	0700063	CF 47K OHM +-5% 1/16W
R2450	0700042	CF 1.2K OHM +-5% 1/16W
R2451	0100081	CF 4.7K OHM +-5% 1/8W
R2454	0700063	CF 47K OHM +-5% 1/16W
R2455	0700064	CF 56K OHM +-5% 1/16W
R2456	0700061	CF 33K OHM +-5% 1/16W
R2466	0700052	CF 6.8K OHM +-5% 1/16W
R2470	0700067	CF 100K OHM +-5% 1/16W
R2471	0700054	CF 10K OHM +-5% 1/16W
R2473	0700051	CF 5.6K OHM +-5% 1/16W
R2474	0700051	CF 5.6K OHM +-5% 1/16W
R2479	0700066	CF 82K OHM +-5% 1/16W
R2480	0119514	FR 10 OHM +-5% 1/4W
R2481	0119514	FR 10 OHM +-5% 1/4W
R2482	0100121	CF 220K OHM +-5% 1/8W
R2483	0700037	CF 560 OHM +-5% 1/16W
R2501	0700027	CF 100 OHM +-5% 1/16W
R2502	0700051	CF 5.6K OHM +-5% 1/16W
R2503	0700027	CF 100 OHM +-5% 1/16W
R2504	0700054	CF 10K OHM +-5% 1/16W
R3006	0700027	CF 100 OHM +-5% 1/16W
R3007	0700027	CF 100 OHM +-5% 1/16W
R3010	0700027	CF 100 OHM +-5% 1/16W
R3013	0700027	CF 100 OHM +-5% 1/16W
R3014	0700041	CF 1K OHM +-5% 1/16W
R3021	0700027	CF 100 OHM +-5% 1/16W
R3024	0700027	CF 100 OHM +-5% 1/16W
R3025	0700061	CF 33K OHM +-5% 1/16W
R3028	0700054	CF 10K OHM +-5% 1/16W
R3029	0700027	CF 100 OHM +-5% 1/16W
R3030	0700027	CF 100 OHM +-5% 1/16W
R3031	0700054	CF 10K OHM +-5% 1/16W
R3032	0700058	CF 22K OHM +-5% 1/16W
R3033	0700058	CF 22K OHM +-5% 1/16W
R3034	0114133	CF 120 OHM +-5% 1/4W
R3038	0700054	CF 10K OHM +-5% 1/16W
R3043	0700027	CF 100 OHM +-5% 1/16W
R3044	0700041	CF 1K OHM +-5% 1/16W
R3045	0700027	CF 100 OHM +-5% 1/16W
R3046	0700027	CF 100 OHM +-5% 1/16W
R3047	0700061	CF 33K OHM +-5% 1/16W
R3048	0700058	CF 22K OHM +-5% 1/16W
R3049	0700032	CF 220 OHM +-5% 1/16W
R3050	0700048	CF 3.9K OHM +-5% 1/16W
R3051	0700047	CF 3.3K OHM +-5% 1/16W
R3053	0700051	CF 5.6K OHM +-5% 1/16W
R3054	0700067	CF 100K OHM +-5% 1/16W
R3055	0700041	CF 1K OHM +-5% 1/16W
R3056	0700037	CF 560 OHM +-5% 1/16W
R3057	0700041	CF 1K OHM +-5% 1/16W
R3058	0700027	CF 100 OHM +-5% 1/16W
R3059	0700041	CF 1K OHM +-5% 1/16W
R3060	0700027	CF 100 OHM +-5% 1/16W
R3061	0700041	CF 1K OHM +-5% 1/16W
R3062	0700027	CF 100 OHM +-5% 1/16W
R3064	0700041	CF 1K OHM +-5% 1/16W
R3065	0700041	CF 1K OHM +-5% 1/16W
R3066	0700041	CF 1K OHM +-5% 1/16W
R3075	0700027	CF 100 OHM +-5% 1/16W
R3076	0700027	CF 100 OHM +-5% 1/16W
R3077	0700041	CF 1K OHM +-5% 1/16W
R3078	0700041	CF 1K OHM +-5% 1/16W
R3079	0700027	CF 100 OHM +-5% 1/16W
R3080	0700041	CF 1K OHM +-5% 1/16W
R3081	0700027	CF 100 OHM +-5% 1/16W
R3082	0700041	CF 1K OHM +-5% 1/16W
R3083	0700027	CF 100 OHM +-5% 1/16W
R3084	0700041	CF 1K OHM +-5% 1/16W
R3085	0700041	CF 1K OHM +-5% 1/16W
R3086	0187038	CF 75 OHM +-5% 1/16W
R3087	0100123	CF 270K OHM +-5% 1/8W
R3088	0100123	CF 270K OHM +-5% 1/8W
R3089	0187038	CF 75 OHM +-5% 1/16W
R3090	0187038	CF 75 OHM +-5% 1/16W
R3091	0187038	CF 75 OHM +-5% 1/16W
R3092	0100123	CF 270K OHM +-5% 1/8W
R3093	0100123	CF 270K OHM +-5% 1/8W
R3094	0700067	CF 100K OHM +-5% 1/16W
R3095	0700067	CF 100K OHM +-5% 1/16W
R3096	0700067	CF 100K OHM +-5% 1/16W
R3097	0187036M	CF 62OHM +-5% 1/16W
R3098	0114141	CF 270 OHM +-5% 1/4W
R3099	0700034	CF 330 OHM +-5% 1/16W
R3100	0700041	CF 1K OHM +-5% 1/16W
R3101	0700041	CF 1K OHM +-5% 1/16W
R3112	0100041	CF 100 OHM +-5% 1/8W
R3113	0700041	CF 1K OHM +-5% 1/16W
R3114	0700041	CF 1K OHM +-5% 1/16W
R3115	0100041	CF 100 OHM +-5% 1/8W
R3116	0100041	CF 100 OHM +-5% 1/8W
R3117	0700041	CF 1K OHM +-5% 1/16W
R3118	0700041	CF 1K OHM +-5% 1/16W
R3119	0700041	CF 1K OHM +-5% 1/16W

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SYMBOL NO.	PART NO.	PART DESCRIPTION
R3121	0700041	CF 1K OHM +-5% 1/16W
R3122	0700041	CF 1K OHM +-5% 1/16W
R3123	0700027	CF 100 OHM +-5% 1/16W
R3125	0700027	CF 100 OHM +-5% 1/16W
R3127	0700027	CF 100 OHM +-5% 1/16W
R3128	0700041	CF 1K OHM +-5% 1/16W
R3129	0700067	CF 100K OHM +-5% 1/16W
R3130	0700041	CF 1K OHM +-5% 1/16W
R3131	0700054	CF 10K OHM +-5% 1/16W
R3134	0700034	CF 330 OHM +-5% 1/16W
R3135	0700067	CF 100K OHM +-5% 1/16W
R3136	0700067	CF 100K OHM +-5% 1/16W
R350	0150111	VR 1K OHM-B
R3504	0700051	CF 5.6K OHM +-5% 1/16W
R3505	0700051	CF 5.6K OHM +-5% 1/16W
R3507	0700029	CF 150 OHM +-5% 1/16W
R351	0150110	VR 500 OHM-B
R3510	0100053	CF 330 OHM +-5% 1/8W
R3512	0700059	CF 27K OHM +-5% 1/16W
R3513	0700029	CF 150 OHM +-5% 1/16W
R3514	0700061	CF 33K OHM +-5% 1/16W
R3517	0100055	CF 390 OHM +-5% 1/8W
R3524	100059	CF 560 OHM +-5% 1/8W
R352	0150110	VR 500 OHM-B
R3527	0700067	CF 100K OHM +-5% 1/16W
R3528	0700058	CF 22K OHM +-5% 1/16W
R3529	0700058	CF 22K OHM +-5% 1/16W
R353	700041	CF 1K OHM +-5% 1/16W
R3531	0700029	CF 150 OHM +-5% 1/16W
R3533	0700061	CF 33K OHM +-5% 1/16W
R3534	0700051	CF 5.6K OHM +-5% 1/16W
R3535	100041	CF 100 OHM +-5% 1/8W
R3536	0700065	CF 68K OHM +-5% 1/16W
R3538	0700058	CF 22K OHM +-5% 1/16W
R3539	0700054	CF 10K OHM +-5% 1/16W
R354	700036	CF 470 OHM +-5% 1/16W
R3540	0150114	VR 10K OHM-B
R3541	0700041	CF 1K OHM +-5% 1/16W
R3542	0700052	CF 6.8K OHM +-5% 1/16W
R3543	0700059	CF 27K OHM +-5% 1/16W
R3546	0700056	CF 15K OHM +-5% 1/16W
R3547	0700048	CF 3.9K OHM +-5% 1/16W
R355	700036	CF 470 OHM +-5% 1/16W
R3553	0700033	CF 270 OHM +-5% 1/16W
R3554	0700044	CF 1.8K OHM +-5% 1/16W
R3558	0700029	CF 150 OHM +-5% 1/16W
R3559	0700061	CF 33K OHM +-5% 1/16W
R3560	0187088	CF 9.1K OHM +-5% 1/16W
R3561	0700059	CF 27K OHM +-5% 1/16W
R3562	0700067	CF 100K OHM +-5% 1/16W
R3563	0700049	CF 4.7K OHM +-5% 1/16W
R3564	0700058	CF 22K OHM +-5% 1/16W
R3566	0150115	VR 20K OHM-B
R3567	0700049	CF 4.7K OHM +-5% 1/16W
R3568	0700056	CF 15K OHM +-5% 1/16W
R3570	0700051	CF 5.6K OHM +-5% 1/16W
R3571	0700051	CF 5.6K OHM +-5% 1/16W
R3572	0700047	CF 3.3K OHM +-5% 1/16W
R3573	0700059	CF 27K OHM +-5% 1/16W
R3574	0700041	CF 1K OHM +-5% 1/16W
R3575	0700029	CF 150 OHM +-5% 1/16W
R3576	0700061	CF 33K OHM +-5% 1/16W
R3577	0700029	CF 150 OHM +-5% 1/16W
R3578	0100123	CF 270K OHM +-5% 1/8W
R3579	0700029	CF 150 OHM +-5% 1/16W
R3580	0700058	CF 22K OHM +-5% 1/16W
R3581	0700067	CF 100K OHM +-5% 1/16W
R3582	0100133	CF 680K OHM +-5% 1/8W
R3584	0700041	CF 1K OHM +-5% 1/16W
R3586	0700054	CF 10K OHM +-5% 1/16W
R3588	0700054	CF 10K OHM +-5% 1/16W
R3589	0700058	CF 22K OHM +-5% 1/16W
R3590	0700054	CF 10K OHM +-5% 1/16W
R3591	0700041	CF 1K OHM +-5% 1/16W
R3593	0187078	CF 3.6K OHM +-5% 1/16W
R3594	0700034	CF 330 OHM +-5% 1/16W
R3595	0700027	CF 100 OHM +-5% 1/16W
R3596	0700043	CF 1.5K OHM +-5% 1/16W
R3597	0700029	CF 150 OHM +-5% 1/16W
R3598	0100037	CF 68 OHM +-5% 1/8W
R3599	0100045	CF 150 OHM +-5% 1/8W
R3606	0100065	CF 1K OHM +-5% 1/8W
R3607	0100065	CF 1K OHM +-5% 1/8W
R3608	0100065	CF 1K OHM +-5% 1/8W
R3609	0700058	CF 22K OHM +-5% 1/16W
R3610	0700041	CF 1K OHM +-5% 1/16W
R3611	187064	CF 910 OHM +-5% 1/16W
R3625	0700027	CF 100 OHM +-5% 1/16W
R3628	0700041	CF 1K OHM +-5% 1/16W
R3630	0100131	CF 560K OHM +-5% 1/8W
R3631	0179536	MG 1M OHM +-5% 1/8W
R3632	0100129	CF 470K OHM +-5% 1/8W
R3633	0700034	CF 330 OHM +-5% 1/16W
R3634	0700034	CF 330 OHM +-5% 1/16W
R3635	0700045	CF 2.2K OHM +-5% 1/16W
R3637	0700036	CF 470 OHM +-5% 1/16W
R3638	0187082	CF 5.1K OHM +-5% 1/16W
R3639	0700036	CF 470 OHM +-5% 1/16W
R3640	0187064	CF 910 OHM +-5% 1/16W
R3641	0700027	CF 100 OHM +-5% 1/16W
R3642	0187072	CF 2K OHM +-5% 1/16W
R3644	0700063	CF 47K OHM +-5% 1/16W
R3647	700041	CF 1K OHM +-5% 1/16W
R3648	100093	CF 15K OHM +-5% 1/8W
R3801	0187038	CF 75 OHM +-5% 1/16W
R3802	0100041	CF 100 OHM +-5% 1/8W

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SYMBOL NO.	PART NO.	PART DESCRIPTION
R3803	0700041	CF 1K OHM +-5% 1/16W
R3804	0700041	CF 1K OHM +-5% 1/16W
R3805	0100123	CF 270K OHM +-5% 1/8W
R3806	0700064	CF 56K OHM +-5% 1/16W
R3807	0700047	CF 3.3K OHM +-5% 1/16W
R3808	0700045	CF 2.2K OHM +-5% 1/16W
R3809	0700064	CF 56K OHM +-5% 1/16W
R3810	0100123	CF 270K OHM +-5% 1/8W
R3811	0700041	CF 1K OHM +-5% 1/16W
R3812	0700041	CF 1K OHM +-5% 1/16W
R3813	0100041	CF 100 OHM +-5% 1/8W
R3814	0187038	CF 75 OHM +-5% 1/16W
R3815	0187038	CF 75 OHM +-5% 1/16W
R3820	0700058	CF 22K OHM +-5% 1/16W
R3821	0700032	CF 220 OHM +-5% 1/16W
R3822	0700061	CF 33K OHM +-5% 1/16W
R3823	0700062	CF 39K OHM +-5% 1/16W
R3824	0700041	CF 1K OHM +-5% 1/16W
R4001	0700046	CF 2.7K OHM +-5% 1/16W
R4002	0187082	CF 5.1K OHM +-5% 1/16W
R4003	0100125	CF 330K OHM +-5% 1/8W
R4004	0700054	CF 10K OHM +-5% 1/16W
R4005	0700045	CF 2.2K OHM +-5% 1/16W
R4006	0700061	CF 33K OHM +-5% 1/16W
R4007	0150157	VR 200K OHM-B RV-6
R4008	0100133	CF 680K OHM +-5% 1/8W
R4009	0150290	VR 50K OHM (B)
R4010	0150290	VR 50K OHM (B)
R4011	0100116	CF 130K OHM +-5% 1/8W
R4012	0700067	CF 100K OHM +-5% 1/16W
R4014	0700049	CF 4.7K OHM +-5% 1/16W
R4015	0700045	CF 2.2K OHM +-5% 1/16W
R4016	0700051	CF 5.6K OHM +-5% 1/16W
R4017	0700038	CF 680 OHM +-5% 1/16W
R4018	0700049	CF 4.7K OHM +-5% 1/16W
R4019	0700063	CF 47K OHM +-5% 1/16W
R402	0700054	CF 10K OHM +-5% 1/16W
R4020	0700057	CF 18K OHM +-5% 1/16W
R4021	0700047	CF 3.3K OHM +-5% 1/16W
R4022	0700037	CF 560 OHM +-5% 1/16W
R4023	0700038	CF 680 OHM +-5% 1/16W
R4024	0100115	CF 120K OHM +-5% 1/8W
R4025	0700049	CF 4.7K OHM +-5% 1/16W
R4028	0700066	CF 82K OHM +-5% 1/16W
R4029	0700041	CF 1K OHM +-5% 1/16W
R4030	0700038	CF 680 OHM +-5% 1/16W
R4031	0100115	CF 120K OHM +-5% 1/8W
R4032	0700051	CF 5.6K OHM +-5% 1/16W
R4033	0700049	CF 4.7K OHM +-5% 1/16W
R4034	0700045	CF 2.2K OHM +-5% 1/16W
R4035	0700049	CF 4.7K OHM +-5% 1/16W
R4036	0700038	CF 680 OHM +-5% 1/16W
R4037	0700063	CF 47K OHM +-5% 1/16W
R4038	0700057	CF 18K OHM +-5% 1/16W
R4039	0700047	CF 3.3K OHM +-5% 1/16W
R404	0700054	CF 10K OHM +-5% 1/16W
R4040	0700037	CF 560 OHM +-5% 1/16W
R4041	0700038	CF 680 OHM +-5% 1/16W
R4042	0100115	CF 120K OHM +-5% 1/8W
R4043	0700066	CF 82K OHM +-5% 1/16W
R4044	0700066	CF 82K OHM +-5% 1/16W
R4045	0700041	CF 1K OHM +-5% 1/16W
R4046	0700038	CF 680 OHM +-5% 1/16W
R4047	0100115	CF 120K OHM +-5% 1/8W
R4048	0700049	CF 4.7K OHM +-5% 1/16W
R4051	0700054	CF 10K OHM +-5% 1/16W
R4052	0700054	CF 10K OHM +-5% 1/16W
R4053	0700066	CF 82K OHM +-5% 1/16W
R407	0700065	CF 68K OHM +-5% 1/16W
R4070	0700045	CF 2.2K OHM +-5% 1/16W
R4071	0700045	CF 2.2K OHM +-5% 1/16W
R4089	0700048	CF 3.9K OHM +-5% 1/16W
R409	0700036	CF 470 OHM +-5% 1/16W
R4090	0700048	CF 3.9K OHM +-5% 1/16W
R4091	0100047	CF 180 OHM +-5% 1/8W
R4092	0700054	CF 10K OHM +-5% 1/16W
R4095	0700054	CF 10K OHM +-5% 1/16W
R4096	0700054	CF 10K OHM +-5% 1/16W
R4103	0700054	CF 10K OHM +-5% 1/16W
R4104	0700027	CF 100 OHM +-5% 1/16W
R4105	0700027	CF 100 OHM +-5% 1/16W
R4106	0700061	CF 33K OHM +-5% 1/16W
R4107	0700058	CF 22K OHM +-5% 1/16W
R4108	0700038	CF 680 OHM +-5% 1/16W
R4109	0700049	CF 4.7K OHM +-5% 1/16W
R4110	0700038	CF 680 OHM +-5% 1/16W
R4111	0700049	CF 4.7K OHM +-5% 1/16W
R4112	0100117	CF 150K OHM +-5% 1/8W
R4113	0100116	CF 130K OHM +-5% 1/8W
R4114	0150160	VR 10K OHM-B +-30%
R4115	0700041	CF 1K OHM +-5% 1/16W
R4116	0700041	CF 1K OHM +-5% 1/16W
R4117	0700061	CF 33K OHM +-5% 1/16W
R4118	0700045	CF 2.2K OHM +-5% 1/16W
R4121	0700054	CF 10K OHM +-5% 1/16W
R4123	0700058	CF 22K OHM +-5% 1/16W
R4124	0700054	CF 10K OHM +-5% 1/16W
R413	01195051	FR 2.2 OHM +-5% 1/4W
R4142	0700045	CF 2.2K OHM +-5% 1/16W
R4143	0700045	CF 2.2K OHM +-5% 1/16W
R4144	0700063	CF 47K OHM +-5% 1/16W
R4145	0700061	CF 33K OHM +-5% 1/16W
R4146	0700041	CF 1K OHM +-5% 1/16W
R4147	0700045	CF 2.2K OHM +-5% 1/16W
R4148	0700063	CF 47K OHM +-5% 1/16W
R4149	0700061	CF 33K OHM +-5% 1/16W

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SYMBOL NO.	PART NO.	PART DESCRIPTION
R4150	0700041	CF 1K OHM +-5% 1/16W
R4151	0700045	CF 2.2K OHM +-5% 1/16W
R4152	0700029	CF 150 OHM +-5% 1/16W
R4153	0700029	CF 150 OHM +-5% 1/16W
R4156	0700054	CF 10K OHM +-5% 1/16W
R4157	0700045	CF 2.2K OHM +-5% 1/16W
R416	01195051	FR 2.2 OHM +-5% 1/4W
R4160	0700054	CF 10K OHM +-5% 1/16W
R4161	0700045	CF 2.2K OHM +-5% 1/16W
R4162	0700041	CF 1K OHM +-5% 1/16W
R4163	0700046	CF 2.7K OHM +-5% 1/16W
R4164	0700041	CF 1K OHM +-5% 1/16W
R4165	0700046	CF 2.7K OHM +-5% 1/16W
R417	0114161	CF 1K OHM +-5% 1/4W
R419	0114161	CF 1K OHM +-5% 1/4W
R420	0700065	CF 68K OHM +-5% 1/16W
R422	0700065	CF 68K OHM +-5% 1/16W
R423	0700041	CF 1K OHM +-5% 1/16W
R425	0700063	CF 47K OHM +-5% 1/16W
R426	0700067	CF 100K OHM +-5% 1/16W
R428	0700058	CF 22K OHM +-5% 1/16W
R437	0700063	CF 47K OHM +-5% 1/16W
R438	0700061	CF 33K OHM +-5% 1/16W
R439	0700054	CF 10K OHM +-5% 1/16W
R440	0700054	CF 10K OHM +-5% 1/16W
R441	0700054	CF 10K OHM +-5% 1/16W
R4626	0187072	CF 2K OHM +-5% 1/16W
R4627	0187086	CF 7.5K OHM +-5% 1/16W
R4628	0700056	CF 15K OHM +-5% 1/16W
R4629	0700063	CF 47K OHM +-5% 1/16W
R4630	0700056	CF 15K OHM +-5% 1/16W
R4631	0187086	CF 7.5K OHM +-5% 1/16W
R4632	0187072	CF 2K OHM +-5% 1/16W
R4633	0700058	CF 22K OHM +-5% 1/16W
R4634	0700058	CF 22K OHM +-5% 1/16W
R4635	0700063	CF 47K OHM +-5% 1/16W
R4636	0100059	CF 560 OHM +-5% 1/8W
R4637	0700041	CF 1K OHM +-5% 1/16W
R4638	0700041	CF 1K OHM +-5% 1/16W
R4639	0700041	CF 1K OHM +-5% 1/16W
R4640	0700032	CF 220 OHM +-5% 1/16W
R4641	0700032	CF 220 OHM +-5% 1/16W
R4642	0700054	CF 10K OHM +-5% 1/16W
R4643	0700054	CF 10K OHM +-5% 1/16W
R4644	0700054	CF 10K OHM +-5% 1/16W
R4645	0700054	CF 10K OHM +-5% 1/16W
R4646	0700054	CF 10K OHM +-5% 1/16W
R4647	0700032	CF 220 OHM +-5% 1/16W
R4648	0700051	CF 5.6K OHM +-5% 1/16W
R4649	0700054	CF 10K OHM +-5% 1/16W
R4650	0700054	CF 10K OHM +-5% 1/16W
R4651	0700054	CF 10K OHM +-5% 1/16W
R4652	0700054	CF 10K OHM +-5% 1/16W
R4653	0700054	CF 10K OHM +-5% 1/16W
R4655	0700067	CF 100K OHM +-5% 1/16W
R4656	0700067	CF 100K OHM +-5% 1/16W
R4657	0700057	CF 18K OHM +-5% 1/16W
R4658	0700057	CF 18K OHM +-5% 1/16W
R4659	0700057	CF 18K OHM +-5% 1/16W
R4660	0700057	CF 18K OHM +-5% 1/16W
R4661	0700064	CF 56K OHM +-5% 1/16W
R4662	0700064	CF 56K OHM +-5% 1/16W
R4663	0700063	CF 47K OHM +-5% 1/16W
R4664	0700063	CF 47K OHM +-5% 1/16W
R4665	0700067	CF 100K OHM +-5% 1/16W
R4666	0700067	CF 100K OHM +-5% 1/16W
R4667	0700054	CF 10K OHM +-5% 1/16W
R4668	0700054	CF 10K OHM +-5% 1/16W
R4669	0700063	CF 47K OHM +-5% 1/16W
R4670	0700057	CF 18K OHM +-5% 1/16W
R4671	0700057	CF 18K OHM +-5% 1/16W
R4672	0700067	CF 100K OHM +-5% 1/16W
R4673	0700067	CF 100K OHM +-5% 1/16W
R4674	0700054	CF 10K OHM +-5% 1/16W
R4675	0700062	CF 39K OHM +-5% 1/16W
R4676	0700041	CF 1K OHM +-5% 1/16W
R4677	0700034	CF 330 OHM +-5% 1/16W
R4678	0700041	CF 1K OHM +-5% 1/16W
R4679	0700054	CF 10K OHM +-5% 1/16W
R4680	0700062	CF 39K OHM +-5% 1/16W
R4681	0700041	CF 1K OHM +-5% 1/16W
R4682	0700034	CF 330 OHM +-5% 1/16W
R4683	0700041	CF 1K OHM +-5% 1/16W
R4684	0700027	CF 100 OHM +-5% 1/16W
R4685	0700027	CF 100 OHM +-5% 1/16W
R4686	0700027	CF 100 OHM +-5% 1/16W
R4687	0700027	CF 100 OHM +-5% 1/16W
R4688	0700027	CF 100 OHM +-5% 1/16W
R4689	0700027	CF 100 OHM +-5% 1/16W
R4690	0700027	CF 100 OHM +-5% 1/16W
R4691	0700027	CF 100 OHM +-5% 1/16W
R4692	0700062	CF 39K OHM +-5% 1/16W
R4693	0700053	CF 8.2K OHM +-5% 1/16W
R4694	0700053	CF 8.2K OHM +-5% 1/16W
R4695	0700053	CF 8.2K OHM +-5% 1/16W
R4696	0700056	CF 15K OHM +-5% 1/16W
R4697	0700063	CF 47K OHM +-5% 1/16W
R4698	0700063	CF 47K OHM +-5% 1/16W
R4699	0700047	CF 3.3K OHM +-5% 1/16W
R4700	0700063	CF 47K OHM +-5% 1/16W
R4701	0179536	MG 1M OHM +-5% 1/8W
R4702	0700051	CF 5.6K OHM +-5% 1/16W
R4703	0700063	CF 47K OHM +-5% 1/16W
R4704	0700063	CF 47K OHM +-5% 1/16W
R4705	0700063	CF 47K OHM +-5% 1/16W
R4706	0700063	CF 47K OHM +-5% 1/16W

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SYMBOL NO.	PART NO.	PART DESCRIPTION
R4707	0700063	CF 47K OHM +-5% 1/16W
R4708	01195051	FR 2.2 OHM +-5% 1/4W
R4709	01195051	FR 2.2 OHM +-5% 1/4W
R4710	0700065	CF 68K OHM +-5% 1/16W
R4711	0700065	CF 68K OHM +-5% 1/16W
R4712	0114161	CF 1K OHM +-5% 1/4W
R4713	0114161	CF 1K OHM +-5% 1/4W
R4716	0700041	CF 1K OHM +-5% 1/16W
R4717	0700041	CF 1K OHM +-5% 1/16W
R4718	0700067	CF 100K OHM +-5% 1/16W
R4719	0700067	CF 100K OHM +-5% 1/16W
R4722	0700036	CF 470 OHM +-5% 1/16W
R4723	0700041	CF 1K OHM +-5% 1/16W
R4727	0700058	CF 22K OHM +-5% 1/16W
R4728	0700058	CF 22K OHM +-5% 1/16W
R4729	0700054	CF 10K OHM +-5% 1/16W
R4730	0700058	CF 22K OHM +-5% 1/16W
R4731	0700058	CF 22K OHM +-5% 1/16W
R4732	0700054	CF 10K OHM +-5% 1/16W
R4734	0700067	CF 100K OHM +-5% 1/16W
R4735	0700067	CF 100K OHM +-5% 1/16W
R4737	0700032	CF 220 OHM +-5% 1/16W
R4738	0700051	CF 5.6K OHM +-5% 1/16W
R4739	0700063	CF 47K OHM +-5% 1/16W
R4742	0100121	CF 220K OHM +-5% 1/8W
R4743	0100121	CF 220K OHM +-5% 1/8W
R4747	0700054	CF 10K OHM +-5% 1/16W
R4748	0700054	CF 10K OHM +-5% 1/16W
R4749	0700054	CF 10K OHM +-5% 1/16W
R4750	0700058	CF 22K OHM +-5% 1/16W
R4752	0700063	CF 47K OHM +-5% 1/16W
R4753	0700055	CF 12K OHM +-5% 1/16W
R4754	0700058	CF 22K OHM +-5% 1/16W
R4755	0700058	CF 22K OHM +-5% 1/16W
R4756	0114135	CF 150 OHM +-5% 1/4W
R4757	0114135	CF 150 OHM +-5% 1/4W
R4758	0700045	CF 2.2K OHM +-5% 1/16W
R4759	0700045	CF 2.2K OHM +-5% 1/16W
R4760	0700045	CF 2.2K OHM +-5% 1/16W
R4761	0700045	CF 2.2K OHM +-5% 1/16W
R4762	0700058	CF 22K OHM +-5% 1/16W
R4763	0700067	CF 100K OHM +-5% 1/16W
R5503	0700039	CF 820 OHM +-5% 1/16W
R5504	700037	CF 560 OHM +-5% 1/16W
R5505	0700061	CF 33K OHM +-5% 1/16W
R5506	0700054	CF 10K OHM +-5% 1/16W
R5508	700032	CF 200 OHM +-5% 1/16W
R5509	0700054	CF 10K OHM +-5% 1/16W
R5510	0700041	CF 1K OHM +-5% 1/16W
R5512	0700034	CF 330 OHM +-5% 1/16W
R5513	0700039	CF 820 OHM +-5% 1/16W
R5514	0700037	CF 560 OHM +-5% 1/16W
R5515	0700029	CF 150 OHM +-5% 1/16W
R5516	0700063	CF 47K OHM +-5% 1/16W
R5517	0700036	CF 470 OHM +-5% 1/16W
R5518	0700042	CF 1.2K OHM +-5% 1/16W
R5522	0700041	CF 1K OHM +-5% 1/16W
R5524	0700052	CF 6.8K OHM +-5% 1/16W
R5528	0700055	CF 12K OHM +-5% 1/16W
R5529	0100129	CF 470K OHM +-5% 1/8W
R5530	0700061	CF 33K OHM +-5% 1/16W
R5531	0700027	CF 100 OHM +-5% 1/16W
R5533	0700027	CF 100 OHM +-5% 1/16W
R5534	0700054	CF 10K OHM +-5% 1/16W
R5537	0700054	CF 10K OHM +-5% 1/16W
R5538	700066	CF 82K OHM +-5% 1/16W
R5539	0700066	CF 82K OHM +-5% 1/16W
R5540	0700054	CF 10K OHM +-5% 1/16W
R5541	0700067	CF 100K OHM +-5% 1/16W
R5542	0700054	CF 10K OHM +-5% 1/16W
R5543	0700054	CF 10K OHM +-5% 1/16W
R5544	0700065	CF 68K OHM +-5% 1/16W
R5545	0700054	CF 10K OHM +-5% 1/16W
R5546	0700059	CF 27K OHM +-5% 1/16W
R5547	0700047	CF 3.3K OHM +-5% 1/16W
R5548	0700061	CF 33K OHM +-5% 1/16W
R5549	0700067	CF 100K OHM +-5% 1/16W
R5550	0700054	CF 10K OHM +-5% 1/16W
R5553	0100119	CF 180K OHM +-5% 1/8W
R5555	0700042	CF 1.2K OHM +-5% 1/16W
R5559	0700027	CF 100 OHM +-5% 1/16W
R5561	0700051	CF 5.6K OHM +-5% 1/16W
R5562	0700033	CF 270 OHM +-5% 1/16W
R5564	0150113	VR 5K OHM-B RS-6
R5565	0700053	CF 8.2K OHM +-5% 1/16W
R5566	0700041	CF 1K OHM +-5% 1/16W
R5567	0700046	CF 2.7K OHM +-5% 1/16W
R5568	0700041	CF 1K OHM +-5% 1/16W
R5570	0700062	CF 39K OHM +-5% 1/16W
R5571	0700037	CF 560 OHM +-5% 1/16W
R5573	0700058	CF 22K OHM +-5% 1/16W
R5574	0700058	CF 22K OHM +-5% 1/16W
R5575	0100125	CF 330K OHM +-5% 1/8W
R5581	0700067	CF 100K OHM +-5% 1/16W
R5583	0700027	CF 100 OHM +-5% 1/16W
R5584	0700041	CF 1K OHM +-5% 1/16W
R5585	0700041	CF 1K OHM +-5% 1/16W
R5591	0700041	CF 1K OHM +-5% 1/16W
R5597	0100049	CF 220 OHM +-5% 1/8W
R5598	0100049	CF 220 OHM +-5% 1/8W
R5599	0100049	CF 220 OHM +-5% 1/8W
R5602	0700041	CF 1K OHM +-5% 1/16W
R5603	0700054	CF 10K OHM +-5% 1/16W
R5604	0100051	CF 270 OHM +-5% 1/8W
R5606	0700054	CF 10K OHM +-5% 1/16W
R5609	0100065	CF 1K OHM +-5% 1/8W

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SYMBOL NO.	PART NO.	PART DESCRIPTION
R5610	0100065	CF 1K OHM +-5% 1/8W
R5611	0100065	CF 1K OHM +-5% 1/8W
R5612	0700038	CF 680 OHM +-5% 1/16W
R5618	0700041	CF 1K OHM +-5% 1/16W
R5619	0700041	CF 1K OHM +-5% 1/16W
R5620	0700041	CF 1K OHM +-5% 1/16W
R5625	0700032	CF 220 OHM +-5% 1/16W
R5626	0700054	CF 10K OHM +-5% 1/16W
R5630	179536	MG 1M OHM +-5% 1/8W
R5901	700034	CF 330 OHM +-5% 1/16W
R5902	0700024	CF 56 OHM +-5% 1/16W
R5903	0700047	CF 3.3K OHM +-5% 1/16W
R5904	0700041	CF 1K OHM +-5% 1/16W
R5905	0700054	CF 10K OHM +-5% 1/16W
R5906	0700039	CF 820 OHM +-5% 1/16W
R5907	0700048	CF 3.9K OHM +-5% 1/16W
R5908	0700041	CF 1K OHM +-5% 1/16W
R5909	0700047	CF 3.3K OHM +-5% 1/16W
R5910	0700045	CF 2.2K OHM +-5% 1/16W
R5911	0700027	CF 100 OHM +-5% 1/16W
R5912	0700047	CF 3.3K OHM +-5% 1/16W
R5913	0700041	CF 1K OHM +-5% 1/16W
R5914	0700054	CF 10K OHM +-5% 1/16W
R5916	0700054	CF 10K OHM +-5% 1/16W
R5917	0187080	CF 4.3K OHM +-5% 1/16W
R5918	0700052	CF 6.8K OHM +-5% 1/16W
R621	0700054	CF 10K OHM +-5% 1/16W
R622	0700049	CF 4.7K OHM +-5% 1/16W
R623	0700032	CF 220 OHM +-5% 1/16W
R624	0700043	CF 1.5K OHM +-5% 1/16W
R626	0700041	CF 1K OHM +-5% 1/16W
R627	0700052	CF 6.8K OHM +-5% 1/16W
R628	0700054	CF 10K OHM +-5% 1/16W
R629	0700045	CF 2.2K OHM +-5% 1/16W
R630	0700065	CF 68K OHM +-5% 1/16W
R631	0700051	CF 5.6K OHM +-5% 1/16W
R632	0700046	CF 2.7K OHM +-5% 1/16W
R634	0700027	CF 100 OHM +-5% 1/16W
R635	0150112	VR 2K OHM-B
R636	0700066	CF 82K OHM +-5% 1/16W
R639	0700051	CF 5.6K OHM +-5% 1/16W
R640	0700046	CF 2.7K OHM +-5% 1/16W
R641	0700027	CF 100 OHM +-5% 1/16W
R642	0700049	CF 4.7K OHM +-5% 1/16W
R643	0700054	CF 10K OHM +-5% 1/16W
R644	0700037	CF 560 OHM +-5% 1/16W
R645	0700066	CF 82K OHM +-5% 1/16W
R646	0700049	CF 4.7K OHM +-5% 1/16W
R647	0700057	CF 18K OHM +-5% 1/16W
R651	0113725	CF 100 OHM +-5% 1/2W
R652	0113725	CF 100 OHM +-5% 1/2W
R653	0113725	CF 100 OHM +-5% 1/2W
R654	0100065	CF 1K OHM +-5% 1/8W
R656	0100053	CF 330 OHM +-5% 1/8W
R660	0700064	CF 56K OHM +-5% 1/16W
R661	0700054	CF 10K OHM +-5% 1/16W
⚠R662	0150115	VR 20K OHM-B
R663	0187110	CF 75K OHM +-5% 1/16W
R664	0700038	CF 680 OHM +-5% 1/16W
R665	0119722	MF 1 OHM +-5% 1W
R666	0119722	MF 1 OHM +-5% 1W
R667	0700051	CF 5.6K OHM +-5% 1/16W
R668	0700061	CF 33K OHM +-5% 1/16W
R669	0700064	CF 56K OHM +-5% 1/16W
R670	0700065	CF 68K OHM +-5% 1/16W
R671	0113766	CF 4.7K OHM +-5% 1/2W
R672	0110129	MF 220 OHM +-5% 1W
R673	0700061	CF 33K OHM +-5% 1/16W
R674	0114135	CF 150 OHM +-5% 1/4W
R675	0113758	CF 2.2K OHM +-5% 1/2W
R680	0700057	CF 18K OHM +-5% 1/16W
R681	0700041	CF 1K OHM +-5% 1/16W
R682	0700041	CF 1K OHM +-5% 1/16W
R683	0700067	CF 100K OHM +-5% 1/16W
R684	0700052	CF 6.8K OHM +-5% 1/16W
R685	0700051	CF 5.6K OHM +-5% 1/16W
R691	0700027	CF 100 OHM +-5% 1/16W
R7001	0700056	CF 15K OHM +-5% 1/16W
R7002	0700053	CF 8.2K OHM +-5% 1/16W
R7003	0700041	CF 1K OHM +-5% 1/16W
R7004	0700061	CF 33K OHM +-5% 1/16W
R7005	0700049	CF 4.7K OHM +-5% 1/16W
R7006	0700054	CF 10K OHM +-5% 1/16W
R7007	0700054	CF 10K OHM +-5% 1/16W
R7008	0700054	CF 10K OHM +-5% 1/16W
R7009	0700044	CF 1.8K OHM +-5% 1/16W
R7010	0700041	CF 1K OHM +-5% 1/16W
R7011	0700057	CF 18K OHM +-5% 1/16W
R7012	0700061	CF 33K OHM +-5% 1/16W
R7013	0700051	CF 5.6K OHM +-5% 1/16W
R7014	0700058	CF 22K OHM +-5% 1/16W
R7016	0700054	CF 10K OHM +-5% 1/16W
R7017	0700054	CF 10K OHM +-5% 1/16W
R7018	0700066	CF 82K OHM +-5% 1/16W
R7021	0700064	CF 56K OHM +-5% 1/16W
R7022	0700054	CF 10K OHM +-5% 1/16W
R7023	0700054	CF 10K OHM +-5% 1/16W
R7024	0700057	CF 18K OHM +-5% 1/16W
R707	0700039	CF 820 OHM +-5% 1/16W
⚠R708	0110355	MF 2.7K OHM +-5% 3W
R709	0113770	CF 6.8K OHM +-5% 1/2W
⚠R710	0110351	MF 1.8K OHM +-5% 3W
R711	0119688	MF 0.22 OHM +-5% 1W
R712	0100031	CF 39 OHM +-5% 1/8W
R719	0113785	CF 27K OHM +-5% 1/2W
R720	0113793	CF 56K OHM +-5% 1/2W

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SYMBOL NO.	PART NO.	PART DESCRIPTION
R721	0700049	CF 4.7K OHM +-5% 1/16W
R722	0100091	CF 12K OHM +-5% 1/8W
R723	0700044	CF 1.8K OHM +-5% 1/16W
R724	0700052	CF 6.8K OHM +-5% 1/16W
R726	0700048	CF 3.9K OHM +-5% 1/16W
R727	0700048	CF 3.9K OHM +-5% 1/16W
R728	0700047	CF 3.3K OHM +-5% 1/16W
R729	0113729	CF 150 OHM +-5% 1/2W
R730	0110101	MF 15 OHM +-5% 1W
R732	0110129	MF 220 OHM +-5% 1W
R733	01195121	FR 1 OHM +-5% 1/4W
R734	0119514	FR 10 OHM +-5% 1/4W
R739	0110251	MF 1.8K OHM +-5% 2W
⚠R742	0700063	CF 47K OHM +-5% 1/16W
R744	0100127	CF 390K OHM +-5% 1/8W
R745	0114149	CF 560 OHM +-5% 1/4W
R751	0113719	CF 56 OHM +-5% 1/2W
R753	0110361	MF 4.7K OHM +-5% 3W
R754	0113766	CF 4.7K OHM +-5% 1/2W
R755	0110363	MF 5.6K OHM +-5% 3W
R766	0700041	CF 1K OHM +-5% 1/16W
R767	0100079	CF 3.9K OHM +-5% 1/8W
R768	0110225	MF 150 OHM +-5% 2W
R769	0114177	CF 4.7K OHM +-5% 1/4W
R770	0700046	CF 2.7K OHM +-5% 1/16W
R771	0700063	CF 47K OHM +-5% 1/16W
R772	0700054	CF 10K OHM +-5% 1/16W
R773	0100113	CF 100K OHM +-5% 1/8W
R774	0187098	CF 24K OHM +-5% 1/16W
R775	0700043	CF 1.5K OHM +-5% 1/16W
R776	0700051	CF 5.6K OHM +-5% 1/16W
R777	0700043	CF 1.5K OHM +-5% 1/16W
R779	0100065	CF 1K OHM +-5% 1/8W
R780	0100041	CF 100 OHM +-5% 1/8W
R781	0110279	MF 27K OHM +-5% 2W
R782	0110279	MF 27K OHM +-5% 2W
R783	0110279	MF 27K OHM +-5% 2W
R784	0110279	MF 27K OHM +-5% 2W
R785	0110279	MF 27K OHM +-5% 2W
R786	0114213	CF 33K OHM +-5% 1/4W
R790	0700053	CF 8.2K OHM +-5% 1/16W
R791	0700047	CF 3.3K OHM +-5% 1/16W
R792	0700059	CF 27K OHM +-5% 1/16W
R793	0700059	CF 27K OHM +-5% 1/16W
R794	0700045	CF 2.2K OHM +-5% 1/16W
R795	0700033	CF 270 OHM +-5% 1/16W
R796	0700041	CF 1K OHM +-5% 1/16W
R797	0700052	CF 6.8K OHM +-5% 1/16W
R798	0700058	CF 22K OHM +-5% 1/16W
R799	0700058	CF 22K OHM +-5% 1/16W
R801B	0110371	MF 12K OHM +-5% 3W
R801G	0110371	MF 12K OHM +-5% 3W
R801R	0110371	MF 12K OHM +-5% 3W
R802B	0110369	MF 10K OHM +-5% 3W
R802G	0110369	MF 10K OHM +-5% 3W
R802R	0110369	MF 10K OHM +-5% 3W
⚠R804B	0151635	VR 1M OHM-B
⚠R804G	0151635	VR 1M OHM-B
⚠R804R	0151635	VR 1M OHM-B
R805B	0179535	MG 680K OHM +-5% 1/2W
R805G	0179535	MG 680K OHM +-5% 1/2W
R805R	0179535	MG 680K OHM +-5% 1/2W
R806B	0179529	MG 10M OHM +-5% 1/2W
R806G	0179529	MG 10M OHM +-5% 1/2W
R806R	0179529	MG 10M OHM +-5% 1/2W
R807B	0100079	CF 3.9K OHM +-5% 1/8W
R808B	0100073	CF 2.2K OHM +-5% 1/8W
R809B	0100033	CF 47 OHM +-5% 1/8W
R810B	0100049	CF 220 OHM +-5% 1/8W
R810G	0100049	CF 220 OHM +-5% 1/8W
R810R	0100049	CF 220 OHM +-5% 1/8W
R811B	0100065	CF 1K OHM +-5% 1/8W
R811G	0100065	CF 1K OHM +-5% 1/8W
R811R	0100065	CF 1K OHM +-5% 1/8W
R812B	0100044	CF 130 OHM +-5% 1/8W
R812G	0100033	CF 47 OHM +-5% 1/8W
R812R	0100033	CF 47 OHM +-5% 1/8W
⚠R813G	01513341	VR 200 OHM-B
⚠R813R	01513341	VR 200 OHM-B
R815B	0100059	CF 560 OHM +-5% 1/8W
R815G	0100059	CF 560 OHM +-5% 1/8W
R815R	0100059	CF 560 OHM +-5% 1/8W
R817B	0100041	CF 100 OHM +-5% 1/8W
R817G	0100049	CF 220 OHM +-5% 1/8W
R817R	0100053	CF 330 OHM +-5% 1/8W
R818B	0100048	CF 200 OHM +-5% 1/8W
R819B	0179535	MG 680K OHM +-5% 1/2W
R819G	0179535	MG 680K OHM +-5% 1/2W
R819R	0179535	MG 680K OHM +-5% 1/2W
R820B	0113744	CF 560 OHM +-5% 1/2W
R820G	0113744	CF 560 OHM +-5% 1/2W
R820R	0113744	CF 560 OHM +-5% 1/2W
R901	0144151	WW 33 OHM +-5% 2W
R902	0139015	CC 1M OHM +-20% 1/2W
⚠R903	0147804	WW 0.75 OHM 16W
R905	0110279	MF 27K OHM +-5% 2W
R906	0700046	CF 2.7K OHM +-5% 1/16W
R907	0700047	CF 3.3K OHM +-5% 1/16W
R908	0700044	CF 1.8K OHM +-5% 1/16W
R909	0700038	CF 680 OHM +-5% 1/16W
R910	0148009	WW 0.056 OHM 2W
R911	0700058	CF 22K OHM +-5% 1/16W
R912	0700042	CF 1.2K OHM +-5% 1/16W
R913	0700047	CF 3.3K OHM +-5% 1/16W
R915	0700014	CF 10 OHM +-5% 1/16W
R916	0700043	CF 1.5K OHM +-5% 1/16W

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SYMBOL NO.	PART NO.	PART DESCRIPTION
R917	0700041	CF 1K OHM +-5% 1/16W
R918	0700047	CF 3.3K OHM +-5% 1/16W
R919	0700041	CF 1K OHM +-5% 1/16W
R920	0700036	CF 470 OHM +-5% 1/16W
R921	0700055	CF 12K OHM +-5% 1/16W
R922	0700023	CF 47 OHM +-5% 1/16W
R923	0700047	CF 3.3K OHM +-5% 1/16W
R931	0114169	CF 2.2K OHM +-5% 1/4W
R932	0700027	CF 100 OHM +-5% 1/16W
R933	0700054	CF 10K OHM +-5% 1/16W
R934	0113719	CF 56 OHM +-5% 1/2W
R935	0700048	CF 3.9K OHM +-5% 1/16W
R936	0110237	MF 470 OHM +-5% 2W
R938	0113760	CF 2.7K OHM +-5% 1/2W
R939	0700056	CF 15K OHM +-5% 1/16W
R940	0700052	CF 6.8K OHM +-5% 1/16W
R941	0700041	CF 1K OHM +-5% 1/16W
R942	0700056	CF 15K OHM +-5% 1/16W
R943	0700041	CF 1K OHM +-5% 1/16W
⚠R948	0119693	MF 0.39 OHM +-5% 1W
R949	0700054	CF 10K OHM +-5% 1/16W
R950	0700058	CF 22K OHM +-5% 1/16W
⚠R951	0113797	CF 82K OHM +-5% 1/2W
⚠R952	0700051	CF 5.6K OHM +-5% 1/16W
R953	0700063	CF 47K OHM +-5% 1/16W
R955	0700041	CF 1K OHM +-5% 1/16W
R956	0700045	CF 2.2K OHM +-5% 1/16W
R957	0700042	CF 1.2K OHM +-5% 1/16W
R981	0700054	CF 10K OHM +-5% 1/16W
R982	0700049	CF 4.7K OHM +-5% 1/16W
⚠R983	0700039	CF 820 OHM +-5% 1/16W
⚠R984	0700043	CF 1.5K OHM +-5% 1/16W
R986	0119514	FR 10 OHM +-5% 1/4W
R987	0114137	CF 180 OHM +-5% 1/4W
R988	0700046	CF 2.7K OHM +-5% 1/16W
R989	0700032	CF 220 OHM +-5% 1/16W
R990	0700041	CF 1K OHM +-5% 1/16W
R991	0700054	CF 10K OHM +-5% 1/16W
R994	0114161	CF 1K OHM +-5% 1/4W

ICs

IC0001	CP00191	IC M37204M8-750SP (HHEA MD)
IC0002	2007831	IC M6M80041P
IC0003	2366301	IC UPD4052BC
IC0004	2004952	IC LA7945N
IC0005	2001753	IC LC7458B-03
IC0006	2008721	IC M62358P
IC0961	2003423	IC UPC7893AHF (LINEAR)
IC0962	2004665	IC PQ09RF21
IC0963	2003421	IC UPC7805AHF
IC1301	2003191	IC STK4274 (LINEAR)
IC1326	2003191	IC STK4274 (LINEAR)
IC1351	2003191	IC STK4274 (LINEAR)
IC1501	2380391	IC UPD6326C
IC2101	2383191	IC LA7990
IC2102	2914051	IC NJM4560D
IC2103	2914051	IC NJM4560D
IC2104	2914051	IC NJM4560D
IC2105	2914051	IC NJM4560D
IC3001	2004793	IC SN76862ANJ-09
IC3002	2004793	IC SN76862ANJ-09
IC3003	2917391	IC MSC11371RS
IC3004	2003221	IC LVA521S-2 (LINEAR)
IC301	2005581	IC M62359P
IC4001	2004591	IC AN5817K (LINEAR)
IC4004	2004362	IC CXA1279AS
IC4005	2917391	IC MSC11371RS
IC402	2004751	IC TA8200AH
IC4601	2004831	IC LA2780N
IC4602	2380391	IC UPD6326C
IC4603	2362651	IC HD14053BP
IC4605	2362602	IC HA17458/UPC4558
IC4606	2362651	IC HD14053BP
IC4607	2362602	IC HA17458/UPC4558
IC4608	2362602	IC HA17458/UPC4558
IC4609	2362651	IC HD14053BP
IC4610	2004242	IC LV1000NA
IC4611	CP00181	IC LC32256P-80 (HHEA MD)
IC4612	2004362	IC CXA1279AS
IC4613	2004362	IC CXA1279AS
IC4614	2004751	IC TA8200AH
IC5501	2020321	IC YAT015
IC601	2003541	IC LA7838 (LINEAR)
IC602	2380651	IC AN5551
⚠IC901	2373343	MODULE STR-M6511
⚠IC902	2000465	IC PS2501-1 (KD/LD) (PHOTO COUPLER)
⚠IC903	2000465	IC PS2501-1 (KD/LD) (PHOTO COUPLER)
⚠IC931	2381344	IC SE130N
IC933	2003413	IC UPC7912HF
IC935	2000632	IC SI-3120CA

TRANSISTORS

QW02	2320598	TR 2SC458B/C/D	
QW03	2320598	TR 2SC458B/C/D	
QW04	2320598	TR 2SC458B/C/D	
QW05	2320598	TR 2SC458B/C/D	
QW06	2320598	TR 2SC458B/C/D	
QW07	2320643	TR 2SC1213C	
QW08	2321351	TR 2SA836/844 D/E	
QW09	2315381	TR 2SA1837	
QW10	2315391	TR 2SC4793	
QW11	2320598	TR 2SC458B/C/D	
Q0001	2320637	TR 2SA673C/D	SI 80MHZ 400MW
Q0002	2320591	TR 2SC458B/C	SI 230MHZ 200MW

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SYMBOL NO.	PART NO.	PART DESCRIPTION
Q0003	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q0004	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q0005	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q0006	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q0007	2320643	TR 2SC1213C SI 80MHZ 400MW
Q0008	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q0009	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q0010	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q0011	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q0012	2320643	TR 2SC1213C SI 80MHZ 400MW
Q0014	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q0015	2320643	TR 2SC1213C SI 80MHZ 400MW
Q0016	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q0017	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q0018	2320643	TR 2SC1213C SI 80MHZ 400MW
Q0019	2323521	TR 2SD789 B/C/D/E
Q0020	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q0021	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q0022	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q0501	2320598	TR 2SC458B/C/D SI 230MHZ 200MW
Q0502	2312992	PHOTO TRANSISTOR PRT-38PT3F(M)
Q0503	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q0504	2320598	TR 2SC458B/C/D SI 230MHZ 200MW
Q1101	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q2101	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q2102	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q2115	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q2116	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q2122	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q2123	2320681	TR 2SA673A B/C SI 80MHZ 400MW
Q2124	2320681	TR 2SA673A B/C SI 80MHZ 400MW
Q2125	2320681	TR 2SA673A B/C SI 80MHZ 400MW
Q2126	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q2130	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q2131	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q2133	2320595	TR 2SC458(D) SI 230MHZ 200MW
Q3001	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3002	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3003	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3004	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3005	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q3503	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3504	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3508	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3510	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3514	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3516	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3517	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q3518	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3519	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q3520	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3521	2326021	TR 2SC1741S
Q3523	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q3524	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3525	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q3801	2320598	TR 2SC458B/C/D SI 230MHZ 200MW
Q3802	2320598	TR 2SC458B/C/D SI 230MHZ 200MW
Q3804	2320598	TR 2SC458B/C/D SI 230MHZ 200MW
Q4001	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4002	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4003	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4004	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4005	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4007	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4008	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4009	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q401	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4010	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4011	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4012	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4015	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q402	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4027	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4028	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q403	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4030	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4032	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4033	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q4034	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q404	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4609	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4610	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q4611	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4612	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q4613	2323521	TR 2SD789 B/C/D/E
Q4615	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4618	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4619	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4620	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4621	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4622	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4716	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q4717	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q5501	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q5502	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q5503	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q5505	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q5506	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q5507	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q5901	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q5902	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q5903	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q5904	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q5906	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q5907	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q601	2312171	TR 2SC3852

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SYMBOL NO.	PART NO.	PART DESCRIPTION
Q607	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q609	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q610	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q611	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q612	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q613	2320637	TR 2SA673C/D SI 80MHZ 400MW
⚠Q701	2326216	TR 2SC3116 S/T
Q707	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q708	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q710	2312171	TR 2SC3852
Q711	2320663	TR 2SC1213AC SI 80MHZ 400MW
Q712	2320663	TR 2SC1213AC SI 80MHZ 400MW
Q713	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q714	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q715	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q716	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q717	2320663	TR 2SC1213AC SI 80MHZ 400MW
Q718	2320663	TR 2SC1213AC SI 80MHZ 400MW
Q720	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q721	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q722	2320637	TR 2SA673C/D SI 80MHZ 400MW
⚠Q777	2315273	TRANSISTOR 2SC4589-04
⚠Q780	2314991	TRANSISTOR 2SC4630
Q801B	2312651	TR 2SC3503 C/D/E/F
Q801G	2312651	TR 2SC3503 C/D/E/F
Q801R	2312651	TR 2SC3503 C/D/E/F
Q802B	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q802G	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q802R	2320591	TR 2SC458B/C SI 230MHZ 200MW
Q803B	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q803G	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q803R	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q804B	2320591	TR 2SC458B/C SI 230MHZ 200MW
⚠Q902	2323782	TR 03P2M
Q903	2320665	TR 2SC1213A(D)
Q931	2323521	TR 2SD789 B/C/D/E
Q932	2312171	TR 2SC3852
Q933	2320637	TR 2SA673C/D SI 80MHZ 400MW
Q934	2320637	TR 2SA673C/D SI 80MHZ 400MW
⚠Q935	2321112	TR 2SA778A
Q937	2326862	TR DTA114ES
Q938	2320637	TR 2SA673C/D SI 80MHZ 400MW
⚠Q940	2323782	TR 03P2M
Q941	2312171	TR 2SC3852

DIODES

DW01	23394911	DI AM01Z
DW02	23394911	DI AM01Z
DW03	23394911	DI AM01Z
DW04	23394911	DI AM01Z
DW05	2398611	DI 1SS254
DW06	2398611	DI 1SS254
DW07	2398611	DI 1SS254
DW08	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
D0001	2398611	DI 1SS254
D0002	2398611	DI 1SS254
D0003	2398611	DI 1SS254
D0004	2398611	DI 1SS254
D0005	2398611	DI 1SS254
D0006	2398611	DI 1SS254
D0008	2398611	DI 1SS254
D0009	2398611	DI 1SS254
D0010	2398611	DI 1SS254
D0011	2398611	DI 1SS254
D0012	2398611	DI 1SS254
D0013	2398611	DI 1SS254
D0017	2398611	DI 1SS254
D0019	2398611	DI 1SS254
D0020	2398611	DI 1SS254
D0021	2398611	DI 1SS254
D0022	2398611	DI 1SS254
D0023	2398611	DI 1SS254
D0024	2398611	DI 1SS254
D0025	2398611	DI 1SS254
D0026	2398611	DI 1SS254
D0030	2398611	DI 1SS254
D0031	2398611	DI 1SS254
D0036	2398611	DI 1SS254
D0037	2398611	DI 1SS254
D0038	2398611	DI 1SS254
D0039	2398611	DI 1SS254
D0050	2398611	DI 1SS254
D0051	2398611	DI 1SS254
D0501	2398611	DI 1SS254
D0502	2398611	DI 1SS254
D0503	2339691	LED SLH-56VC77F
D1301	23394911	DI AM01Z
D2101	23383211	DI 1SS270
D2102	23383211	DI 1SS270
D2103	23383211	DI 1SS270
D2104	23383211	DI 1SS270
D2105	23383211	DI 1SS270
D2107	23383211	DI 1SS270
D2108	23383211	DI 1SS270
D2109	23383211	DI 1SS270
D2111	23383211	DI 1SS270
D3001	2398611	DI 1SS254
D3002	2398611	DI 1SS254
D3003	2398611	DI 1SS254
D3004	2398611	DI 1SS254
D3005	2398611	DI 1SS254
D3008	2398611	DI 1SS254
D3502	2398611	DI 1SS254
D3503	2398611	DI 1SS254
D3504	2398611	DI 1SS254

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SYMBOL NO.	PART NO.	PART DESCRIPTION
D3505	2398611	DI 1SS254
D3506	2398611	DI 1SS254
D3507	2398611	DI 1SS254
D3508	2398611	DI 1SS254
D3509	2398611	DI 1SS254
D3511	2398611	DI 1SS254
D3512	2398611	DI 1SS254
D3513	2398611	DI 1SS254
D3516	2398611	DI 1SS254
D3517	2398611	DI 1SS254
D3518	2398611	DI 1SS254
D3519	2398611	DI 1SS254
D4001	2398611	DI 1SS254
D4002	2398611	DI 1SS254
D406	2398611	DI 1SS254
D407	2398611	DI 1SS254
D408	2398611	DI 1SS254
D409	2398611	DI 1SS254
D410	2398611	DI 1SS254
D413	2398611	DI 1SS254
D414	2398611	DI 1SS254
D416	2398611	DI 1SS254
D417	2398611	DI 1SS254
D418	2398611	DI 1SS254
D420	2398611	DI 1SS254
D421	2398611	DI 1SS254
D4604	2398611	DI 1SS254
D4605	2398611	DI 1SS254
D4606	2398611	DI 1SS254
D4607	2398611	DI 1SS254
D4608	2398611	DI 1SS254
D4609	2398611	DI 1SS254
D4611	2398611	DI 1SS254
D4612	2398611	DI 1SS254
D4613	2398611	DI 1SS254
D4614	2398611	DI 1SS254
D5503	2398611	DI 1SS254
D5504	2398611	DI 1SS254
D5507	2398611	DI 1SS254
D5508	2398611	DI 1SS254
D5509	2398611	DI 1SS254
D5510	2398611	DI 1SS254
D5902	2398611	DI 1SS254
D601	2398611	DI 1SS254
D620	2398611	DI 1SS254
D621	2398611	DI 1SS254
D622	2398611	DI 1SS254
D651	CH00031M	DI AU02V1 (HHEA MD)(HHSC MD)
D652	23394911	DI AM01Z
D653	23394911	DI AM01Z
D654	23394911	DI AM01Z
D657	2398611	DI 1SS254
D659	2398611	DI 1SS254
D660	23394911	DI AM01Z
D661	2398611	DI 1SS254
⚠D701	CH00031M	DI AU02V1 (HHEA MD)(HHSC MD)
⚠D702	CH00031M	DI AU02V1 (HHEA MD)(HHSC MD)
D703	CH0041M	DI ES1FV1 (HHEA MD)
D704	CH0041M	DI ES1FV1 (HHEA MD)
D705	CH00031M	DI AU02V1 (HHEA MD)(HHSC MD)
⚠D706	2348511	DIODE RS3FS
D707	2359371	DI S3L60 (HHEA MD)
D7070	2359371	DI S3L60 (HHEA MD)
D708	2398611	DI 1SS254
D709	2398611	DI 1SS254
D710	2334581	DI ES1A SI
D711	2398611	DI 1SS254
D712	23394911	DI AM01Z
D713	2398611	DI 1SS254
D714	2398611	DI 1SS254
D715	2398611	DI 1SS254
D716	2398611	DI 1SS254
D722	2398611	DI 1SS254
D722A	2398611	DI 1SS254
D723	2398611	DI 1SS254
D724	2398611	DI 1SS254
D728	2398611	DI 1SS254
D729	2398611	DI 1SS254
D781	2398611	DI 1SS254
D782	2349661M	DIODE SM-1XN02
D801B	23383211	DI 1SS270
D801G	23383211	DI 1SS270
D801R	23383211	DI 1SS270
⚠D901	2342061	DI D3SB(A)60
⚠D903	23394811	DI AS01Z
D904	2398611	DI 1SS254
D905	2398611	DI 1SS254
⚠D906	23394811	DI AS01Z
⚠D931	2349661M	DIODE SM-1XN02
⚠D932	2398611	DI 1SS254
⚠D933	2349661M	DIODE SM-1XN02
D934	2398611	DI 1SS254
D935	2398611	DI 1SS254
⚠D936	2338944	DI FML-G12S(F)
⚠D937	2338944	DI FML-G12S(F)
⚠D938	2338944	DI FML-G12S(F)
⚠D939	2338932	DI FMG-G36S
⚠D940	2338944	DI FML-G12S(F)
⚠D941	2338944	DI FML-G12S(F)
⚠D942	2338944	DI FML-G12S(F)
D945	23394911	DI AM01Z
D946	23394911	DI AM01Z
⚠D948	2398611	DI 1SS254
⚠D949	2398611	DI 1SS254
D951	2398611	DI 1SS254
D952	2398611	DI 1SS254

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SYMBOL NO.	PART NO.	PART DESCRIPTION
D953	2398611	DI 1SS254
D954	2398611	DI 1SS254
D958	2398611	DI 1SS254
ZD0001	2334122	ZD RD5.1EB1 SI
ZD0002	2339844	ZD HZS6B1
ZD0003	2339839	ZD HZS5C3
ZD0004	2339885	ZD HZS12B2
ZD0005	2339885	ZD HZS12B2
ZD0006	2339885	ZD HZS12B2
ZD0007	2339849	DIODE-ZENER HZS6C3
ZD0008	2335991	ZD HZT-33
ZD0009	2339839	ZD HZS5C3
ZD0010	2339885	ZD HZS12B2
ZD0011	2339885	ZD HZS12B2
ZD0012	2339885	ZD HZS12B2
ZD0013	2339885	ZD HZS12B2
ZD0015	2339885	ZD HZS12B2
ZD0016	2339885	ZD HZS12B2
ZD0017	2339885	ZD HZS12B2
ZD0501	2339885	ZD HZS12B2
ZD0502	2339885	ZD HZS12B2
ZD1301	2334324	ZD RD36EB3
ZD1302	2334324	ZD RD36EB3
ZD1311	2334324	ZD RD36EB3
ZD1312	2334324	ZD RD36EB3
ZD1326	2334324	ZD RD36EB3
ZD1327	2334324	ZD RD36EB3
ZD1336	2334324	ZD RD36EB3
ZD1337	2334324	ZD RD36EB3
ZD1351	2334324	ZD RD36EB3
ZD1352	2334324	ZD RD36EB3
ZD1361	2334324	ZD RD36EB3
ZD1362	2334324	ZD RD36EB3
ZD1501	2331797	ZD HZ5C1
ZD2101	2334285	DIODE-ZENER RD24EB4
ZD2102	2334285	DIODE-ZENER RD24EB4
ZD2103	2334285	DIODE-ZENER RD24EB4
ZD2104	2334285	DIODE-ZENER RD24EB4
ZD2105	2334285	DIODE-ZENER RD24EB4
ZD2106	2334285	DIODE-ZENER RD24EB4
ZD2107	2334285	DIODE-ZENER RD24EB4
ZD2108	2334285	DIODE-ZENER RD24EB4
ZD2109	2334285	DIODE-ZENER RD24EB4
ZD2110	2334285	DIODE-ZENER RD24EB4
ZD2111	2334285	DIODE-ZENER RD24EB4
ZD2112	2334285	DIODE-ZENER RD24EB4
ZD3001	2339836	DIODE-ZENER HZS5B3
ZD3002	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3003	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3004	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3005	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3006	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3007	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3008	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3009	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3010	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3011	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3012	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3013	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3014	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3015	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3017	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3019	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3021	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3022	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3024	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD303	2331799	ZD HZ5(C)3 SI
ZD304	2331799	ZD HZ5(C)3 SI
ZD305	2331799	ZD HZ5(C)3 SI
ZD308	2339868M	ZD HZS9C2TA
ZD309	2334285	DIODE-ZENER RD24EB4
ZD310	2334323M	DIODE-ZENER RD36EB2
ZD311	2339885	ZD HZS12B2
ZD312	2339885	ZD HZS12B2
ZD313	2339885	ZD HZS12B2
ZD314	2339885	ZD HZS12B2
ZD315	2339885	ZD HZS12B2
ZD3801	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3802	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3804	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD3805	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD4001	2339836	DIODE-ZENER HZS5B3
ZD4601	2331795	ZD HZ-5 (B2)
ZD4602	2339812M	DIODE-ZENER HZS3A2
ZD4603	2339812M	DIODE-ZENER HZS3A2
ZD5501	2339885	ZD HZS12B2
ZD5502	2339868M	ZD HZS9C2TA
ZD5503	2339868M	ZD HZS9C2TA
ZD5504	2339868M	ZD HZS9C2TA
ZD5510	2334324	ZD RD36E53
ZD5514	2331849	ZD HZ-12(C3)
ZD5519	2339885	ZD HZS12B2
ZD5520	2339885	ZD HZS12B2
ZD651	2331807	ZD HZ-6 (C1)
ZD652	2331154	ZD HZ12 (A1-3/B1-3/C1-3)
ZD653	2334243	ZD RD16E(B2)
ZD656	2334305	ZD RD30E (B4)
ZD709	2339612M	ZD HZS3BLL-TA
⚠ZD710	2335461	ZD HZ24 (2L)
ZD712	2334334	ZD RD39EB3
ZD713	2339889	ZD HZS12C3
ZD714	2339825	ZD HZS4B2
ZD715	2339889	ZD HZS12C3
ZD801B	2331827	ZD HZ-9 (C1)
ZD801G	2331827	ZD HZ-9 (C1)
ZD801R	2331827	ZD HZ-9 (C1)

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SYMBOL NO.	PART NO.	PART DESCRIPTION
⚠ZD902	2339223	ZD HZS27-3L
ZD904	2334304	ZD RD30EB3
ZD905	2334304	ZD RD30EB3
ZD931	2339885	ZD HZS12B2
⚠ZD932	2339231	ZD HZS30-1L
⚠ZD933	2339042	ZD HZS7A2L
ZD936	2335461	ZD HZ24 (2L)
ZD937	2331809	ZD HZ-6 (C3)
ZD957	2339877	ZD HZS-11C1
		TRANSFORMERS
⚠T701	2260291	HOLIZONTAL DRIVE TRANSFORMER
⚠T702	2436493	FLYBACK TRANSFORMER
⚠T703	2272762	SPC TRANSFORMER
⚠T901	2213993	POWER TRANSFORMER
⚠T902	2215594	SWITCHING TRANSFORMER
T903	2215861	POWER TRANSFORMER
		FUSES
⚠F601	2722353	FUSE 1.6A
⚠F901	2722358	FUSE 5A
⚠F903	2722358	FUSE 5A
⚠F931	2722387M	FUSE 3A
⚠F932	2722357	FUSE 4A
⚠F933	2722387M	FUSE 3A
⚠F934	2722387M	FUSE 3A
⚠F935	2722357	FUSE 4A
⚠F936	2722387M	FUSE 3A
⚠F937	2722353	FUSE 1.6A
		COMPOUND COMPONENTS
CP0001	2791754	DSS306-55B101M
CP0002	2791754	DSS306-55B101M
CP0003	2791754	DSS306-55B101M
CP0004	2791754	DSS306-55B101M
CP0005	2791754	DSS306-55B101M
CP0006	2791754	DSS306-55B101M
CP0007	2791754	DSS306-55B101M
CP0501	2381126	REMOTE CONTROL RECEIVER SPS-409-1F
⚠CP702	0150668	FOCUS PACK MHF174-09
⚠CP901	2793312	CAPRISTOR
⚠CP901A	2784342	CONDENSER COVER
CP902	2793312	CAPRISTOR
MF0001	2163972	CERAMIC FILTER 6MHZ
MF0002	2168831	CRYSTAL
MF5501	2786685	CRYSTAL
M301	2375401	CHIP BORAD HC3041 (3-LINE DIGITAL COMB)
M302	JP00241	PSA KC-001SP IN P UNIT (HHEA MD)

SYMBOL NO.	PART NO.	PART DESCRIPTION
		COILS
LW01	2122943	LA AXIAL COIL 10 MICRO H +-10%
LW02	2123468	FERRITE BEADS CORE LEAD 0.8
LW03	2123468	FERRITE BEADS CORE LEAD 0.8
LW04	2123468	FERRITE BEADS CORE LEAD 0.8
L0001	2122956	LA AXIAL COIL 100 MICRO H +-10%
L0002	2122956	LA AXIAL COIL 100 MICRO H +-10%
L0003	2146091	COIL-OSC
L0005	2122956	LA AXIAL COIL 100 MICRO H +-10%
L0006	2122956	LA AXIAL COIL 100 MICRO H +-10%
L0011	2122956	LA AXIAL COIL 100 MICRO H +-10%
L0012	2122956	LA AXIAL COIL 100 MICRO H +-10%
L0013	2122956	LA AXIAL COIL 100 MICRO H +-10%
L1501	2120482	FILTER COIL 100 MICRO H +-10%
L2101	2120484	FILTER COIL
L2102	2120484	FILTER COIL
L2103	2120484	FILTER COIL
L2104	2120484	FILTER COIL
L2105	2120484	FILTER COIL
L2106	2120484	FILTER COIL
L3002	2120489	FILTER COIL 100 MICRO H +-10%
L3003	2120482	FILTER COIL 100 MICRO H +-10%
L3004	2120489	FILTER COIL 100 MICRO H +-10%
L3006	2125721	CHOKE COIL (HHEA MD)(HHSC MD)
L3501	2120482	FILTER COIL 100 MICRO H +-10%
L3503	2122956	LA AXIAL COIL 100 MICRO H +-10%
L4001	2122253	LA AXIAL COIL 100 MICRO H
L401	2123461	FERRITE BEADS CORE
L402	2123461	FERRITE BEADS CORE
L404	2123461	FERRITE BEADS CORE
L405	2122253	LA AXIAL COIL 100 MICRO H
L4601	2123461	FERRITE BEADS CORE
L4602	2123461	FERRITE BEADS CORE
L5502	2120482	FILTER COIL 100 MICRO H +-10%
L5503	2122949	LA AXIAL COIL 33 MICRO H +-10%
L5504	2120482	FILTER COIL 100 MICRO H +-10%
L5505	2120482	FILTER COIL 100 MICRO H +-10%
L5901	2120482	FILTER COIL 100 MICRO H +-10%
L701	2121181	FILTER COIL
L703	2275381	CHOKE COIL
L705	2120486	FILTER COIL 4700 MICRO H +-5%
L706	2124511	LINEARITY COIL
L707	2122095	FILTER COIL 27 MICRO H
L708	2120482	FILTER COIL 100 MICRO H +-10%
L709	2122094	FIXED COIL
⚠L901	2123507	LINE FILTER
⚠L902	2123507	LINE FILTER
⚠L905	2124365	COIL
L906	2122653	FERRITE BEADS CORE
L912	2123469M	FERRITE BEADS CORE READ 2.3
L939	2161152	FILTER COIL

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SYMBOL NO.	PART NO.	PART DESCRIPTION
L940	2161152	FILTER COIL
L941	2161152	FILTER COIL
L942	2161152	FILTER COIL
L943	2161152	FILTER COIL
L944	2161152	FILTER COIL
L945	2161152	FILTER COIL
L946	2161152	FILTER COIL
L947	2161152	FILTER COIL
L949	2161152	FILTER COIL
L950	2161152	FILTER COIL
L951	2161152	FILTER COIL
L953	2161152	FILTER COIL
		SWITCHES
S0501	2633321	5 KEY TACT SWITCH
S0502	2632901	KEY SWITCH
S5502	2621051	SLIDE SWITCH
		MISCELLANEOUS
1	3204544	CONT PNL ASS'Y (W/O INDOOR P.) (HHEA MD)
	3827871	INDOOR PLATE (HHEA MD) (HSCC MD)
	3821732	CONTROL DOOR (W/O DOOR PLATE) (HHEA MD)
	3827872	DOOR PLATE (HHEA MD) (HSCC MD)
	3875771	LATCH 4T02
	3273431	CONTROL BUTTON (HHEA MD) (HSCC MD)
	4159427	3X10 TAPPING SCREW WITH WASHER
	4518772	3X12 TNE
3	3462209	BACK COVER (HHEA MD) (HSCC MD)
4	4492091	LENS CRT METAL
	4524915	HEXAGON HEAD B-TAP.SCREW 4X20
	4492171	UNIT COVER
	4524911	HEXAGON FLANGEHEAD 4X12
5	3873612	PWB HOLDER
6	3811971	BACK COVER DOOR
7	4519512	TAPPING SCREW 4X16 MM
8	3204811	TERMINAL HOLDER ASS'Y
9	4524911	HEXAGON FLANGEHEAD 4X12
	3204182	R/C LENS (HHEA MD) (HSCC MD)
	3725352	BOARD HOLDER
10	3744173	CLAMPER
11	4519503	3X12 TAPPING SCREW
12	4329271	WASHER (F)
13	4522901	NUT
14	4520232	4X16 DT SCREW
	3700921	LAMP LENS (HHEA MD) (HSCC MD)
	3742021	LEAD HOLDER(CABINET)
	4336491	CASTER METAL
	4159427	3X10 TAPPING SCREW WITH WASHER
	4519512	TAPPING SCREW 4X16 MM
	4526351	SPACER (CABINET)
15	4520771	4X18 TAPPING SCREW WITH WASHER

SYMBOL NO.	PART NO.	PART DESCRIPTION
16A	H310771	SPEAKER GRILL (50UX)
16B	H310773	SPEAKER GRILL (46UX)
17A	PH00572	DECO PANEL (50UX)
17B	PH00571	DECO PANEL (46UX)
20	4137975	4X16 ZA R SCREW
21A	QD00422	CABINET ASS'Y (50UX19K)
21B	QD00412	CABINET ASS'Y (50UX18B)
21C	QD00421	CABINET ASS'Y (46UX17K)
21D	QD00411	CABINET ASS'Y (46UX16B)
23	4288069	K55 MIRROR
29	4618172	RUBBER SPACER
30	4524912	HEXAGON FLANGEHEAD 4X16
34	H512098	LOWER REAR BD (HHEA MD)
⚠35	3708417	SP LENS S-ASS'Y (R)(G)
⚠36	3708418	SP LENS S-ASS'Y (B)
38A	3189761	SCREEN ASS'Y (50UX)
38B	3189762	SCREEN ASS'Y (46UX)
39A	NT00072	SCREEN FRAME (50UX19K)
39B	NT00062	SCREEN FRAME (50UX18B)
39C	NT00071	SCREEN FRAME (46UX17K)
39D	NT00061	SCREEN FRAME (46UX16B)
	4527821	M6 BOLT
	4520515	4X30 SPECIAL SCREW
	3744172	CLUMT 20
⚠40	4869321	LENS CRT ASS'Y R (HHEA MD) (HSCC MD)
⚠41	4869322	LENS CRT ASS'Y G (HHEA MD) (HSCC MD)
⚠42	4869323	LENS CRT ASS'Y B (HHEA MD) (HSCC MD)
⚠EANT	HC00021	ANTENNA SWITCH (HHEA MD)
ERR	2902266	7P SUB MINI PLUG PIN
⚠E101	2444877	DEFLECTION YOKE (HHEA MD) (HSCC MD)
E104	2776542	VM MAGNET (HHEA MD)
E301	2573971	REM. CONTROL CLU-850GR (HHEA MD) (HSCC)
⚠E801B	2698671	CPT SOCKET
⚠E801G	2698671	CPT SOCKET
⚠E801R	2698671	CPT SOCKET
E802	2661756	1P PLUG PIN WITH BASE
EP51	2997979	1J MINI CONNECTOR
EVM	2976362	4J EH CONNECTOR
EVMC	EF01201	VM COIL CONNECTOR
FE0001	2429691	FRONTEND V8-A68FT
J01	2983111	3PJACK WITH S TERMINAL
J3001	2672891	6P PIN JACK WITH S TERMINAL
J3002	2672894	5P PIN JACK
J4502	2672901	4P PUSH TERMINAL
ND901	4520883	M3X12 SCREW WITH WASHER
ND936	2771892	FERRITE BEADS CORE 004
ND939	4520883	M3X12 SCREW WITH WASHER
NF601	2721351	FUSE HOLDER
NF901	2721351	FUSE HOLDER
NF903	2721351	FUSE HOLDER
NF932	2721351	FUSE HOLDER
NF935	2721351	FUSE HOLDER
NF937	2721351	FUSE HOLDER

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PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL NO.	PART NO.	PART DESCRIPTION
NIC901	4520883	M3X12 SCREW WITH WASHER
NIC933	4520883	M3X12 SCREW WITH WASHER
NIC935	4520883	M3X12 SCREW WITH WASHER
NI131B	4520885	M3X16 SCREW
NI131C	4518772	3X12 TNE
NI601B	4520883	M3X12 SCREW WITH WASHER
NQ710B	4520883	M3X12 SCREW WITH WASHER
NQ777B	4520883	M3X12 SCREW WITH WASHER
NQ777C	2771892	FERRITE BEADS CORE 004
NQ777D	2771893	FERRITE BEADS CORE
NQ780B	4520883	M3X12 SCREW WITH WASHER
NQ932	4520883	M3X12 SCREW WITH WASHER
NQ941	4520883	M3X12 SCREW WITH WASHER
NT902	4518772	3X12 TNE
NWQ2	4520883	M3X12 SCREW W/ WASHER
N003	3700342	WIRE CLAMP
N0962A	4520883	M3X12 SCREW WITH WASHER
N0963A	4520883	M3X12 SCREW WITH WASHER
N1030	4159427	3X10 TAPPING SCREW WITH WASHER
N1031D	4518772	3X12 TNE
N1032D	8815124	WASHER LOCK 3MM
N1033	4518772	3X12 TNE
N104	4520883	M3X12 SCREW WITH WASHER
N1055	4159425	3X16 TAPPING SCREW
N1060	3746482	WIRE CLAMP
N1075	4159427	3X10 TAPPING SCREW WITH WASHER
N151B	4526322	M8X10 SCREW
N151G	4526322	M8X10 SCREW
N151R	4526322	M8X10 SCREW
N155	4524911	HEXAGON FLANGEHEAD 4X12
N157B	4524913	HEXAGON FLANGEHEAD 4X12 R
N157G	4524913	HEXAGON FLANGEHEAD 4X12 R
N157R	4524913	HEXAGON FLANGEHEAD 4X12 R
N201	QR01111	INSTRUCTION MANUAL (HHEA MD)
N241B	4526102	4X18 SCREW
N241G	4526102	4X18 SCREW
N241R	4526102	4X18 SCREW
N244B	4526101	4X12 SCREW
N244G	4526101	4X12 SCREW
N244R	4526101	4X12 SCREW
N245B	4518253	3X10 TAPPING SCREW FOR PLASTIC
N245G	4518253	3X10 TAPPING SCREW FOR PLASTIC
N245R	4518253	3X10 TAPPING SCREW FOR PLASTIC
N302	4520883	M3X12 SCREW WITH WASHER
N402A	4520881	M3X12 SCREW WITH WASHER
N408B	3332021	EARTH SPRING
N408G	3332021	EARTH SPRING
N408R	3332021	EARTH SPRING
N409B	4159411	3X8 KNURL TAPPING SCREW
N409G	4159411	3X8 KNURL TAPPING SCREW
N409R	4159411	3X8 KNURL TAPPING SCREW
N4614A	4520883	M3X12 SCREW WITH WASHER
N6020	3881321	ADHESION
N801	3763751	SK BINDER
N803	4520881	M3X8 SCREW WITH WASHER
⚠N9	2745414	POWER SUPPLY CORD
N9BFN	4520883	M3X12 SCREW WITH WASHER
N9N	4520881	M3X8 SCREW WITH WASHER
N9NN	4770601	3 FLANGE NUT
N9NR	4520883	M3X12 SCREW WITH WASHER
N901	3772201	AC CORD HOLDER
N907	3739671	CORD HOLDER
PAN	2663821	2P PLUG PIN
PCB	2661753	PIN PLUG WITH BASE
PCG	2661753	PIN PLUG WITH BASE
PCR	2661753	PIN PLUG WITH BASE
PD	2663135	PLUG PIN WITH BASE (6P)
PDR	2902263	4P SUB MINI PLUG PIN
PFJ	2902266	7P SUB MINI PLUG PIN
PKZ	2674631	5P CONNECTOR
PMB	2665272	4P PLUG PIN WITH BASE
PMG	2665272	4P PLUG PIN WITH BASE
PMR	2665272	4P PLUG PIN WITH BASE
PP31	2661751	PLUG PIN WITH BASE
PP51	2661756	1P PLUG PIN WITH BASE
PRR	2902266	7P SUB MINI PLUG PIN
PS	2661752	PLUG PIN
PS	2661942	CONNECTOR
PSD1	2674631	5P CONNECTOR
PSD2	2674635	10P CONNECTOR
PSD3	2674634	8P CONNECTOR
PSD4	2674635	10P CONNECTOR
PSD5	2674631	5P CONNECTOR
PSL	2661944	CONNECTOR
PTS	2663821	2P PLUG PIN
PVM	2902263	4P SUB MINI PLUG PIN
P1VM	2902263	4P SUB MINI PLUG PIN
P51	2661756	1P PLUG PIN WITH BASE
⚠RL901	2640572	POWER RELAY
SG780	2340039	SPARK GAP
SG781	2340039	SPARK GAP
⚠SG801B	2340039	SPARK GAP
⚠SG801G	2340039	SPARK GAP
⚠SG801R	2340039	SPARK GAP
⚠SG802B	2340039	SPARK GAP
⚠SG802G	2340039	SPARK GAP
⚠SG802R	2340039	SPARK GAP
⚠SP401	GK00022	SPEAKER 120MM (HHEA MD)
⚠SP402	GK00022	SPEAKER 120MM (HHEA MD)
⚠SP403	2414942	SPEAKER (HHEA MD) (HSCC MD)
⚠SP404	2414942	SPEAKER (HHEA MD) (HSCC MD)
TH2101	2340552	THERMISTOR
W811B	2692461	FOCUS LEAD WIRE (HHEA MD) (HSCC MD)
W811G	2692461	FOCUS LEAD WIRE (HHEA MD) (HSCC MD)
W811R	2692461	FOCUS LEAD WIRE (HHEA MD) (HSCC MD)
X4601	2786585	CRYSTAL
X5501	2791501	CRYSTAL HC-49/U

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